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Ontario. Legislative Assembly

SESSIONAL PAPERS

VOL. LXXIX.—PART IV

THIRD SESSION

OF THE

TWENTY-SECOND LEGISLATURE

OF THE

PROVINCE OF ONTARIO

SESSION 1947

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TORONTO
Printed and Published by Baptist Johnston, Printer to the King's Most Excellent Majesty
1948

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FOR PART IV

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PROVINCIAL
AUDITOR'S
REPORT

1945-46

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 27, 1947

ONTARIO

TORONTO
Printed and Published by T. E. Bowman
Printer to the King's Most Excellent Majesty
1947

To The Honourable Ray Lawson, O.B.E.,
Lieutenant-Governor of the Province of Ontario

May It Please Your Honour:

The undersigned has the honour to present to Your Honour the Report of the Provincial Auditor for the year ended March 31st, 1946.

Respectfully submitted,

Leslie M. Frost,
Treasurer

Treasury Department, Ontario
January 20th, 1947

Provincial Auditor's Office,
January 20th, 1947

TO THE HONOURABLE LESLIE M. FROST,
Provincial Treasurer

SIR:

I have the honour to submit, for the information of the Legislative Assembly, my report for the year ended March 31st, 1946, in accordance with the requirements of The Audit Act.

Respectfully submitted,

H. A. COTNAM, C.A.,
Provincial Auditor

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(A)

TREASURY BOARD MINUTES

(A)

TREASURY BOARD MINUTES

STATEMENT OF TREASURY BOARD MINUTES ISSUED FOR EXPENDITURES IN EXCESS OF APPROPRIATIONS, DURING THE FISCAL YEAR ENDED MARCH 31st, 1946

Department of Agriculture

	Warrant	Expended
Main Office:		
Services and Expenses re Agricultural Work, etc.	$ 25,000.00	$ 24,126.81
Unemployment Insurance Stamps	900.00	279.75
Agricultural Enquiry Commission	5,000.00	922.15
Agricultural and Horticultural Societies Branch:		
Salaries	1,275.00	1,158.75
Horticultural, Agricultural and Vegetable Growers' Meetings, etc.	1,000.00	958.07
Field Crop Competitions, Prizes, etc.	800.00	536.39
Grants to Encourage Local Plowing Matches	300.00	196.10
Live Stock Branch:		
Salaries	176.00	171.71
Educational and Demonstration Work, etc.	2,800.00	2,790.96
Women's Institute Branch: Salaries	6,755.00	6,003.12
Fruit Branch:		
Salaries	1,165.00	1,162.26
Fruit Work, etc., including Expenditure under The Plant Diseases Act, etc.	12,000.00	11,730.80
Loans in Accordance with The Co-operative Marketing Loan Act	50,000.00	15,100.00
Agricultural Representative Branch: Salaries	375.00	370.83
Crops, Seeds and Weeds Branch:		
Salaries	1,333.00	1,332.32
Maintenance	700.00	625.70
Administration of The Weed Control Act, Crop Improvement Work, etc.	10,500.00	10,169.67
Subventions—Freight on Agricultural Lime	3,500.00	3,250.10
Kemptville Agricultural School:		
General Office—Expenses	8,500.00	8,396.67
All Divisions—Salaries, Wages, Travelling and General Expenses, etc.	8,200.00	5,110.87
Horticultural Experiment Station, Vineland:		
Salaries	100.00	394.93
Services, Travelling and Other Expenses	1,050.00	1,018.81
Western Ontario Experimental Farm, Ridgetown:		
Purchase of Stock and Equipment, etc.	1,350.00	1,327.70
Demonstration Farm, New Liskeard: Salaries	2,860.00	2,769.42
Demonstration Farm, Hearst:		
Maintenance, Wages, Equipment, etc.	350.00	341.23
Ontario Veterinary College, Guelph:		
Salaries	70,125.00	67,768.26
Travelling Expenses	1,000.00	3,191.62
Fuel, Light, Water, etc., and Contingencies	64,800.00	64,572.86
Scholarships and Prizes	260.00	54.37
Research, Investigation and Extension Work	59,150.00	59,056.68
Provincial Zoologist—		
Salaries	3,100.00	3,100.00
Services, Equipment and Repairs	3,000.00	87.90
Ontario Agricultural College, Guelph:		
General Office—		
Salaries	68,700.00	65,490.55
Expenses	249,600.00	231,043.84
All Divisions—		
Salaries	349,020.00	348,966.99
Expenses	216,280.00	210,727.78

Department of Attorney-General

	Warrant	Expended
Main Office:		
General Litigation and Legal Services	$ 300.00	$ 96.21
Commissions and Sundry Investigations	15,000.00	10,723.83
Unemployment Insurance Stamps	300.00	114.38
Office of the Legislative Counsel:		
Salaries	1,000.00	917.66
Maintenance	1,050.00	576.79
Supreme Court of Ontario:		
Master's Office—Salaries	3,500.00	1,825.00
Criminal Justice Accounts:		
Toronto and York Crown Attorney's Office—Salaries	6,000.00	4,956.40
Districts—Salaries	9,500.00	8,860.66
Magistrates—Salaries	9,000.00	7,949.71
Public Trustee's Office:		
Salaries	20,000.00	16,136.35
Cost-of-Living Bonus	3,000.00	265.19
Fire Marshal's Office: Salaries	3,000.00	2,407.77
Inspector of Legal Offices:		
Local Masters of Titles Offices—		
Expenses	100.00	283.93
Forms, Copying and Contingencies	500.00	39.88
County Judges, Travelling Expenses, Attending Division Courts	1,000.00	589.75
Ontario Securities Commission:		
Services, Expenses, Valuations, etc.	2,500.00	1,191.35
Maintenance	4,000.00	3,993.23

Department of Education

	Warrant	Expended
Main Office:		
Salaries	3,000.00	2,518.91
Maintenance	4,500.00	3.918.31
Proportion of Cost of Minister's Report	500.00	355 71
Legislative Library: Salaries	100.00	39.10
Public and Separate Schools Branch:		
Travelling and Moving Expenses of Inspectors, etc.	35,000.00	31,393.41
Correspondence Courses, Salaries and Maintenance	2,000.00	1,592.35
Auxiliary Classes, Salaries, etc.	500.00	44.89
Visual and Radio Instruction, Services and Maintenance	23,500.00	18,601.73
Art Department—Salaries, etc.	1,500.00	354.81
Courses in Music, Salaries, etc.	10,000.00	8,314.10
Pamphlets and Reports for Use of Schools	25,000.00	19,314.72
Departmental Examinations Branch:		
Salaries	3.000.00	2,974.76
Maintenance	2.000.00	1,545.52
Services and Travelling Expenses	10.000.00	7,123.01
Training Schools Branch:		
Salaries	1,500.00	1,366.72
Travelling Expenses of Normal School Students and Masters to Rural Public and Separate Schools, etc.	2,500.00	1.393.35
Normal Schools:		
Peterborough—		
Salaries	400.00	299.43
Travelling Expenses	300.00	37.65
Stratford—Salaries	2,200.00	2.199.96
High Schools and Collegiate Institutes Branch: Salaries	6.500.00	6.092.92
Vocational Education Branch:		
Salaries	2.000.00	1,515.51
Travelling and Moving Expenses	1,500.00	611.22
Maintenance	2.000.00	1,252.77
Ontario Training College for Technical Teachers:		
Salaries	19,500.00	1,149.91
Critic Teaching, including Travelling of Masters and Students	10,000.00	6,713.61
Maintenance	5.000.00	2 560.50

	Warrant	Expended
Provincial Technical Institutes:		
Provincial Institute of Mining, Haileybury—Salaries, etc. and Maintenance	$ 2,500.00	$ 2,267.23
Legislative Grants: Secondary School Education	100,000.00	99,865.25
Ontario School for the Deaf, Belleville:		
Travelling Expenses	300.00	133.88
Maintenance	5,000.00	1,882.75
Ontario School for the Blind, Brantford: Salaries	2,500.00	1,948.70

Department of Game and Fisheries

	Warrant	Expended
Main Office—Compensation for Injured Workmen	100.00	13.89
Enforcement of The Game and Fisheries Act	46,000.00	45,895.84
Game Animals and Birds—Services and Expenses	7,000.00	6,002.27
Macdiarmid—Services, Expenses, Repairs, etc.	500.00	245.91
Biological and Fish Culture Branch:		
Hatcheries, Services, Maintenance and Operation	1,000.00	2,574.75
Bear Bounty	3,000.00	1,348.00

Department of Health

	Warrant	Expended
Main Office:		
Unforeseen and Unprovided	1,000.00	964.48
Grants—County Councils re School Medical Inspections	1,600.00	3,447.50
Dental Service Branch: Salaries	4,000.00	3,712.12
Epidemiological Branch: Outbreaks of Diseases, etc.	55,000.00	52,831.72
Tuberculosis Prevention Branch:		
Maintenance	2,000.00	1,997.61
Grants—Maintenance of Patients in Sanatoria for Consumptives	135,000.00	79,714.05
Ottawa Clinic—Salaries	100.00	62.05
Timmins Clinic—Salaries	200.00	72.78
Industrial Hygiene Branch: Salaries	600.00	583.08
Laboratory Branch, Central Laboratory: Maintenance	10,000.00	5,062.72
Regional Laboratories, Kingston: Maintenance	500.00	489.18
Hospitals Branch:		
Ontario Hospitals Branch—General Expenses		
Salaries	12,100.00	9,485.19
Unemployment Insurance Stamps	1,800.00	1,701.74
Ontario Hospitals—		
Brockville—Salaries	29,200.00	26,472.63
Cobourg—Salaries	1,200.00	1,066.56
Fort William—Salaries	3,000.00	2,910.79
Hamilton		
Salaries	34,000.00	30,471.43
Maintenance	40,000.00	39,999.91
Kingston—Salaries	12,800.00	9,026.81
Langstaff—Salaries	6,000.00	5,090.63
London—Salaries	59,000.00	54,057.86
New Toronto—Salaries	47,700.00	44,846.39
Orillia Hospital School—Salaries	32,700.00	30,596.18
Penetanguishene—Salaries	11,400.00	11,375.38
St. Thomas—		
Salaries	100,000.00	46,847.18
Maintenance	100,000.00	76,243.19
Toronto—		
Salaries	43,100.00	41,302.20
Maintenance	25,000.00	24,843.25
Whitby—Salaries	10,000.00	8,096.23
Woodstock—		
Salaries	56,500.00	54,769.23
Maintenance	10,000.00	9,998.44
Toronto Psychiatric—Salaries	18,500.00	13,111.77

Department of Highways

	Warrant	Expended
Main Office: Salaries	26,000.00	23,675.21

Department of Labour

	WARRANT	EXPENDED
Main Office: Unemployment Insurance Stamps	$ 100.00	$ 30.86
Industry and Labour Board: Maintenance	10,000.00	7,150.02
Apprenticeship Branch:		
Travelling Expenses	1,500.00	758.39
Maintenance	1,000.00	999.69
Board of Examiners of Operating Engineers: Salaries	300.00	172.69
Labour Relations Board: Maintenance	7,000.00	5,793.51

Department of Lands and Forests

	WARRANT	EXPENDED
Main Office:		
Maintenance and Operating	15,000.00	12,148.38
Legal Fees and Expenses	500.00	172.10
Field Services:		
Surveys Branch—Ground Surveys	1,500.00	1,258.51
Forest Research Branch—Spruce Budworm Control and General Field Research	65,000.00	59,235.66
Basic Organization—District Offices (including Provincial Parks)—Salaries	20,000.00	13,536.61
Extra Fire Fighting		
Salaries—Temporary	110,000.00	94,815.53
Maintenance and Operating	25,000.00	16,235.42
Scaling—		
Salaries—Temporary	85,000.00	80,477.29
Travelling Expenses	7,000.00	3,921.16
Maintenance and Operating	10,000.00	6,821.32
Air Service Branch—		
Salaries	15,000.00	9,368.33
Travelling Expenses	2,000.00	1,505.37
Reforestation Branch—		
Salaries	18,000.00	11,933.79
Travelling Expenses	1,500.00	693.46
Maintenance and Operating	5,000.00	195.94

Department of Legislation

	WARRANT	EXPENDED
Office of the Speaker:		
Salaries	800.00	417.90
Indemnities—Members, including Mileage	12,000.00	11,665.80
Legislative Committeee for Art Purposes	156.50	156.50
Cost-of-Living Bonus	250.00	120.47

Department of Mines

	WARRANT	EXPENDED
Main Office:		
Maintenance	5,000.00	1,323.50
Fees—Legal, Professional and Miscellaneous Services	5,000.00	2,956.85
Mines Inspection Branch: Salaries, Equipment and Expenses	2,500.00	1,832.42
Laboratories: Salaries, Equipment and Operation of Laboratories	3,500.00	2,977.13
Office of Mining Recorders: Salaries and Expenses	6,000.00	5,995.27

Department of Municipal Affairs

	WARRANT	EXPENDED
Main Office: Subsidy to Mining Municipalities	5,500.00	5,177.93
Ontario Municipal Board:		
Salaries	5,000.00	4,686.38
Travelling Expenses	600.00	441.11

Department of Planning and Development

	WARRANT	EXPENDED
Main Office:		
Travelling Expenses	3,000.00	2,371.10
Maintenance	6,500.00	6,095.37
Planning and Investigation for Conservation, Restoration and Development of Natural Resources, etc.	104,000.00	103,958.99

Department of the Prime Minister

	WARRANT	EXPENDED
Main Office:		
Salaries	$ 15,000.00	$ 6,739.78
Travelling Expenses	1,500.00	693.37
Maintenance	1,300.00	1,299.96

Provincial Auditor's Office

Salaries	1,500.00	3,905.87

Department of Provincial Secretary

Main Office:		
Maintenance	1,000.00	937.38
Unemployment Insurance Stamps	300.00	239.62
Registrar-General's Branch: Salaries	15,000.00	35,233.35
Reformatories and Prisons Branch:		
Main Office—		
Salaries	6,500.00	5,203.60
Travelling Expenses	1,000.00	296.91
Maintenance	1,500.00	1,101.36
Legal Costs and Expenses Covering Sundry Investigations	200.00	43.28
Cost-of-Living Bonus	16,000.00	6,459.08
Grants—Training Schools	8,000.00	5,872.75
Board of Parole—		
Salaries	2,500.00	1,781.21
Allowances and Expenses for Parole Board	1,800.00	1,108.27
Travelling Expenses	700.00	679.69
Maintenance	600.00	168.31
Ontario Reformatories—		
Guelph—		
Salaries	10,000.00	9,596.68
Maintenance	12,000.00	4,059.36
Industries	55,000.00	46,837.78
Mimico—		
Salaries	4,000.00	3,783.83
Maintenance	22,000.00	17,617.58
Industries	30,000.00	21,953.84
Mercer, Toronto—		
Salaries	4,000.00	3,361.62
Maintenance	2,000.00	1,708.87
Industries	40,000.00	39,880.01
Industrial Farm, Burwash—		
Salaries	5,000.00	1,068.81
Maintenance	15,000.00	11,909.10
Ontario Training School for Boys, Bowmanville—		
Salaries	9,000.00	8,013.20
Maintenance	30,000.00	21,155.75
Repairs to Buildings, etc.	5,800.00	1,614.54
Ontario Training School for Girls, Cobourg—		
Salaries	12,000.00	9,545.70
Maintenance	15,000.00	10,693.93
Repairs to Buildings, etc.	1,500.00	1,130.86

Department of Provincial Treasurer

Main Office: Salaries	4,500.00	3,582.81
Bureau of Statistics and Research: Maintenance	300.00	297.09
Controller of Revenue Branch:		
Salaries	11,000.00	10,437.34
Travelling Expenses	1,000.00	3,250.58
Maintenance	2,500.00	2,205.02
Fees	3,700.00	3,656.72

	WARRANT	EXPENDED
Post Office: Salaries	$ 1,000.00	$ 136.75
Travel and Publicity Bureau: Salaries	5,000.00	3,810.87
Office of King's Printer:		
Salaries	4,600.00	3,504.68
Cartage	100.00	85.48
Official Gazette	2,000.00	1,051.72

Department of Public Welfare

Old Age Pensions Commission:		
Pensions—Old Age and Blind	$835,500.00	664,287.44
Medical Services	9,000.00	8,468.89
Special Provincial Bonus	11,500.00	618.97

Department of Public Works

Main Office:		
Travelling Expenses	2,300.00	1,409.12
Maintenance	1,000.00	999.84
Public Buildings—Maintenance and Repairs:		
General Superintendence—Salaries	3,700.00	3,152.42
Lieutenant-Governor's Apartment—Salaries	100.00	65.00
Legislative and Departmental Buildings—		
Administrative Services—		
Salaries	3,500.00	3,021.94
Typewriter Inspection and Repairs	200.00	189.54
Maintenance Staff—		
Salaries	33,000.00	30,500.16
Maintenance	15,000.00	14,963.87
Mechanical Staff—		
Salaries	2,000.00	1,624.94
Repairs and Alterations	9,000.00	6,736.72
Osgoode Hall—		
Salaries	3,000.00	2,741.04
Maintenance	4,600.00	3,868.75
District Buildings—Salary of Caretaker, Timiskaming	600.00	240.89
Ontario Hospitals—St. Thomas, Farm Operating Expenses	13,000.00	11,851.97
Miscellaneous—Moving Patients, etc., of Provincial Institutions Leased to Dominion Government	100,000.00	53,236.07
Public Buildings—Construction:		
General—to Provide Additional Accommodation for Government Purposes, Construction of New Buildings, etc.	400,000.00	256,351.74
Ontario Reformatories—Additions, Alterations, etc.	2,000.00	1,185.63
Total Treasury Board Minutes	$5,013,180.50	$4,154,322.74

(B)

SPECIAL WARRANTS

(B)

SPECIAL WARRANTS

The Second Session of the Twenty-first Legislature of Ontario was dissolved on March 24, 1945, without having resolved itself into Committee of Supply to consider the estimates for the fiscal year ended March 31, 1946. In order that the business of government might be carried on, funds were made available by Special Warrants to meet expenditures urgent and necessary for the public good. Such Special Warrants were obtained under authority of Section 13, ss. 1 (*b*) of The Audit Act, R.S.O. 1937, chap. 24, and were issued as follows:

April 12, 1945	$5,611,603.50
May 12, 1945	5,391,328.41
June 1, 1945	7,103,389.08
	$18,106,320.99

These Special Warrants were based on monthly forecasts of ordinary expenditure and capital payments, prepared by all departments which were submitted to a sub-committee of the Budget Committee. Each item was closely scrutinized and only those items which could be considered "urgently and immediately required for the public good" were approved.

On issuance of the Special Warrants, the funds made available to the Provincial Treasurer were allocated in accordance with the detailed schedules previously submitted by the several departments and as approved by the Budget Committee.

Under the authority of the Special Warrants above stated, expenditures were made until the passing of The Supply Act, 1945.

The Supply Act, 1945, 9 Geo. VI (Second Session), Chap. 11, providing funds in accordance with the estimates for the fiscal year ended March 31, 1946, in the amount of $81,317,176.30 was passed and assented to July 20, 1945. These appropriations were declared to include and not to be in addition to the amounts authorized by the above noted Special Warrants.

The following schedule shows by Departments the allocation, expenditures and the unexpended amounts of the Special Warrants:

	Special Warrants Dated April 12, May 12 and June 1, 1945		
DEPARTMENT	AUTHORIZED	EXPENDED	UNEXPENDED
Agriculture	$ 767,632.49	$ 568,413.55	$ 199,188.94
Attorney-General	797,759.66	711,403.50	86,356.16
Education	1,855,899.99	1,388,343.07	167,556.92
Game and Fisheries	174,620.00	155,958.39	18,661.61
Health	2,894,830.00	2,493,652.48	101,177.52
Highways	383,500.00	364,716.82	18,783.18
Insurance	15,900.00	13,756.33	2,143.67
Labour	537,920.00	156,072.96	381,847.04
Lands and Forests	1,412,508.32	791,909.27	620,599.05
Legislation	21,082.06	9,227.85	11,854.21

DEPARTMENT	AUTHORIZED	EXPENDED	UNEXPENDED
Lieutenant-Governor	$ 2,810.00	$ 2,495.00	$ 315.00
Mines	141,735.00	100,452.92	14,282.08
Municipal Affairs	24,300.00	20,029.98	4,270.02
Planning and Development	53,365.47	35,452.70	17,912.77
Prime Minister	64,681.00	62,272.97	2,408.03
Provincial Auditor	29,350.00	28,185.03	1,164.97
Provincial Secretary:			
Main Office and Registrar-General	70,700.00	57,400.96	13,299.04
Reformatories and Prisons	645,850.00	526,418.81	119,431.19
Provincial Treasurer	1,014,645.00	894,634.63	150,010.37
Public Welfare	6,654,232.00	6,262,200.75	392,031.25
Public Works	410,000.00	204,851.10	205,148.90
Miscellaneous	100,000.00	276.25	99,723.75
	$18,106,320.99	$14,848,155.32	$3,258,165.67
Ordinary	$13,141,820.99	$10,708,570.04	$2,433,250.95
Capital	4,964,500.00	4,139,585.28	824,914.72
	$18,106,320.99	$14,848,155.32	$3,258,165.67

These expenditures were subsequently included in the votes and items as authorized by The Supply Act, 1945, and form part of the Supply Act expenditure for the fiscal year 1946, as shown in the Public Accounts, 1946.

Special Warrants, other than the above mentioned, are shown in the following statement:

STATEMENT OF SPECIAL WARRANTS ISSUED DURING THE FISCAL YEAR ENDED MARCH 31st, 1946

(excluding Special Warrants dated April 12, 1945, May 12, 1945, and June 1, 1945, respectively)

DATE OF WARRANT	SERVICE		WARRANT	EXPENDED 1945-46	UN-EXPENDED
			$ c.	$ c.	$ c.
	Department of Agriculture				
	Grant to the Cochrane District Producers Co-operative Ltd. for the purpose of assisting in the construction of a Potato Warehouse.				
	Balance unexpended, 1944-45	$15,000.00			
Aug. 28, 1945	Warrant	5,000.00	20,000.00	20,000.00	
	Department of Attorney-General				
Feb. 15, 1946	Payment of Newspaper Advertisements and Telegraph Accounts incurred in connection with the Radio Address of The Honourable the Attorney-General, delivered on Friday, November 23rd, 1945, and entitled "Report on the Windsor Strike"		600.00	584.64	15.36

Date of Warrant	Service	Warrant	Expended 1945-46	Unexpended
		$ c.	$ c.	$ c.
	Department of Education			
	Services and Expenses and Honoraria of a Committee on Planning, Construction and Equipment of Schools in Ontario. Balance unexpended, 1944-45	8,412.54	6,187.17	2,225.37
	Payment of Expenses of a Commission on Education under the chairmanship of The Honourable Mr. Justice Hope, appointed by Order-in-Council, March 21st, 1945.			
Apr. 5, 1945	Warrant $10 000.00			
July 4, 1945	Warrant 31,445.00	41,445.00	30,510.74	10,934.26
June 13, 1945	Payment of Ten Scholarships of One Hundred Dollars each for Teachers of French employed in the Collegiate Institutes, High, Continuation and Vocational Schools of Ontario, selected to attend the Summer Course for Teachers of Oral French conducted by the University of Western Ontario at Trois Pistoles, Quebec, June 28th to August 22nd, 1945	1 000.00	1,000.00	
June 13, 1945	Payment of Transportation Costs incurred by the following schools to December 31st, 1944—District of Kenora, P.S.S. No. 3, Zealand, $158.62; County of Essex, P.S.S. No. 2, Pelee, $75.00; P.S.S. No. 4, Pelee, $75.00	308.62	308.62	
Dec. 18, 1945	Grant to the Canadian Arrangements Committee for the World Youth Conference	250.00	250.00	
Oct. 11, 1945	Public and Separate Schools Branch:			
	Educational Services for Handicapped Children, for which no other provision can be made	4,000.00	1,464.74	2,535 26
	Model Elementary School Building, Services, Materials and Expenses for Construction and Equipment in part	25,000.00	6.979.52	18.020.48
	Revision of Courses of Study, Services, Travelling, Printing, etc.	10.000.00	800.00	9.200 00
	Physical Fitness and Recreation Programme:			
	Grants and Maintenance—			
	Salaries and Expenses $7,000.00			
	Community Programme Grants 75,000.00			
	Camp Subsidies 10,000.00			
	Recreation Maintenance Grants 8,000.00	100,000.00	27,021.16	72,978.84
	Vocational Education Branch:			
	Instruction in Handicrafts, for Provision and Maintenance of Schools by Ontario College of Art	20.000.00	17,249.52	2,750.48
	Research and Revision of Courses, Grants, Services, Travelling and Supplies	5,000.00	2,727.10	2,272.90

DATE OF WARRANT	SERVICE	WARRANT	EXPENDED 1945–46	UN-EXPENDED
		$ c.	$ c.	$ c.
	Legislative Grants: For Vocational Education, Cost of Education of Non-resident Pupils.	10,000.00		10,000.00
	Main Office: Departmental Publications	11,000.00	10,822.58	177.42
	High Schools and Collegiate Institutes Branch: Pamphlets and Reports for use of Schools, Services, Travelling, Printing, etc.	8,000.00	7,083.01	916.99
	Department of Health			
July 10, 1945	Grants: Arnprior and District Memorial Hospital, Arnprior, $15,000.00; West Lincoln Memorial Hospital, Grimsby, $10,000.00; Wingham General Hospital, Wingham, $10,000.00	35,000.00	35,000.00	
Oct. 30, 1945	Payment of Expenses of the Ontario Municipal Health Services Board	1,000.00	466.62	533.38
Nov. 20, 1945	Grant to the Wellesley Hospital, Toronto, $150,000.00; Grant to Queen's University, Kingston, $112,500.00, to be distributed by the University as follows: $75,000.00 to the Kingston General Hospital and $37,500.00 to Hotel Dieu Hospital, Kingston, for the purpose of improving Teaching Facilities as required by the University in each of the said Hospitals	262,500.00	262,500.00	
	Department of Lands and Forests			
June 19, 1945	Settlement re Assignment of Timber Areas	111,000.00	111,000.00	
	Department of the Prime Minister			
June 26, 1945	Purchase of Amenities and other Requisites for the Ship and Crew of H.M.C.S. "Ontario," which has been adopted by the Province of Ontario, recently commissioned in Great Britain for service in the war against Japan	5,800.00	4,251.65	1,548.35
Aug. 28, 1945	Payment of Expenses of a Commission to enquire into and report upon all matters concerned with Scientific and Industrial Research as they affect the Province of Ontario, under the chairmanship of Dr. R. C. Wallace, appointed by Order-in-Council dated the 28th day of August, 1945	10,000.00	4,788.99	5,211.01
	Purchase and Distribution of Apples for Members of the Armed Forces at home and overseas. Balance unexpended 1944–45 $ 680.44			
Feb. 27, 1946	Warrant 4,500.00	5,180.44	4,032.32	1,148.12

Date of Warrant	Service	Warrant	Expended 1945-46	Unexpended
		$ c.	$ c.	$ c.
	Department of Provincial Treasurer			
	Payment of Expenses incurred in connection with the Royal Commission on Public Halls, established by Order-in-Council made 27th June, 1944. Balance unexpended, 1944-45 $ 19.70			
Apr. 25, 1945	Warrant 1,500.00	1,519.70	1,329.20	190.50
	Payment of Expenditures in connection with Dominion Provincial Conference, 1945.			
Aug. 28, 1945	Warrant $6,000.00			
Feb. 26, 1946	Warrant 6,000.00	12,000.00	10,851.25	1,148.75
Jan. 15, 1946	Payment of Rent, Office Furniture and Equipment, Salaries, Maintenance and all other Expenditures connected with the Establishing of an Office in Ottawa in regard to the Dominion-Provincial Conference, 1945	4,000.00	1,686.29	2,313.71
	Department of Public Works			
	Purchase and Framing of a Portrait of Hon. Gordon D. Conant, Prime Minister of Ontario from October 21st, 1942, to May 18th, 1943. Balance unexpended, 1944-45	316.00	60.00	256.00
Feb. 5, 1946	Payment of Accounts for Rental and Caretaking of Leased Premises and Expenses in connection therewith for Office Accommodation for Departments of the Government at 455 Spadina Ave., Toronto, and 129 Queen St. and Store No. 7 and 8 on the Arcade at 130 Sparks St., Ottawa	8,000.00	7,326.09	673.91
	Total	721,332.30	576,281.21	145,051.09

REPORT FOR 1946

OF

The Workmen's Compensation Board
ONTARIO

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
Sessional No. 28, 1947

ONTARIO

TORONTO
Printed and Published by T. E. BOWMAN, Printer to the King's Most Excellent Majesty.
1947

To The Honourable

The Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:

The undersigned begs leave respectfully to present to Your Honour the annual report of the Workmen's Compensation Board of Ontario for the year ending on the 31st day of December, 1946.

CHARLES DALEY,
Minister of Labour.

March 17th, 1947.

THE WORKMEN'S COMPENSATION BOARD

WILLIAM MORRISON, K.C.
Chairman

DR. D. J. GALBRAITH,
Vice-Chairman

JOHN F. CAULEY,
Commissioner

S. R. JOHNSTON,
Secretary

REPORT FOR 1946

OF

The Workmen's Compensation Board

ONTARIO

Offices:

4th Floor, Canada Life Building,
330 University Ave., Toronto.

To His Honour The Lieutenant-Governor:

The Workmen's Compensation Board begs to submit its Report for the year 1946.

GENERAL REVIEW

The year shows an increase of payroll, accidents reported, and compensation awarded, each item reaching an all-time high record. The payroll covered increased 10.93 per cent., the accidents reported 17.21 per cent., and the benefits awarded 25.63 per cent. over corresponding figures for 1945.

Payroll in Schedule 1

The payroll in Schedule 1 was $1,295,440,500. in 1946, as compared with $1,167,802,000. in 1945.

Accidents Reported

Accidents reported increased from 118,220 in 1945 to 138,570 in 1946.

Benefits Awarded

During 1946 the benefits (compensation, medical aid, rehabilitation, etc.) amounted to $16,502,023.89, as compared with $13,135,938.38 awarded during 1945.

Schedule 1 Assessments

The average rate of assessment increased from $1.12 for each $100 of payroll to $1.16, the increase being due to more hazardous industries being substituted for less hazardous industries in the post-war period: there was no substantial increase in rates charged the employers. At the end of 1946 there were 35,296 employers under Schedule 1, as compared with 29,039 at the end of 1945, the addition being largely due to inclusion of industries not formerly under Schedule 1.

Assessments paid for 1946 amounted to $12,937,916.21 and it is estimated that a further $2,082,000.00 will be received. The total assessment for 1946, on a provisional basis, is therefore $15,019,916.21. There was $61,028.00 received as refunds from various sources and from application of sections by way of penalties and other sources of income. The total receipts for the year (actual and estimated) were $15,080,944.21.

Schedule 1 Benefits and Charges

The compensation and medical aid for Schedule 1 industries, including estimates for what is still to be awarded for accidents happening during the year, amounted to $13,239,244.31. There were other outlays of $1,421,261.83, being $680,819.16 charged for administration expenses (including $973.00 debit adjustment of prior years' expenses), $182,066.58 for other expenses of non-administrative character, $38,328.80 for mine rescue work, $342,762.00 grants to accident prevention associations organized under the Act, $131,371.95 for the Board's clinic, $8,221.37 for special treatment for paraplegics, $36,858.25 for the special arrangements with the Toronto General Hospital, $284.12 for outlays under Section 8 of the Act and $549.60 special expenses charged to the classes. The total expenditures and charges for the year were $14,660,506.14.

Schedule 2 and Crown Industries

Schedule 2 industries are those in which the employer is individually liable for accidents to his workmen. Dominion Crown cases under the Act by Dominion legislation, and Provincial Crown cases which are now under the Act, are included.

The total amount awarded in Schedule 2 industries and Crown cases was $2,345,197.61, as compared with $2,555,764.16 during 1945. Of this $2,345,197.61, $1,033,962.68 was for Dominion Crown cases and $125,782.08 was for Provincial Crown cases.

Administration Expenses

The gross expenses of the Board were $1,019,957.68, of which $182,066.58 was for non-administrative services, that is those services which, mainly, medical and investigatory, are in the nature of benefits rather than administrative. The gross administration expenses are therefore $837,891.10, of which $679,846.16 has been charged to Schedule 1 and constitutes 4.80 per cent. of the benefits awarded in Schedule 1.

The Accident Fund

The Accident Fund is comprised of Schedule 1 funds, and includes Current Funds out of which temporary payments of compensation, medical aid, administration expenses, clinic and special hospital items are paid, the Silicosis Account, Pension Fund, Disaster Reserve, Second Injury Fund, Compensation Deferred, Investment Reserve, Contingent Reserve, and Operating Reserve, as well as funds to complete claims (including pneumoconiosis claims) for which final settlement has not been made.

The total amount held unexpended or due is $60,830,738.70 and is comprised of investments of $59,504,176.08, $75,189.54 cash in banks, and $2,181,478.03 receivable (including $2,082,000.00 adjustments on 1946 assessments) less $930,104.95 bank overdraft.

Pension Fund

The purpose of the Pension Fund is to take care of future payments of pensions which have already been awarded. Actuarial tables, embodying the contingencies of death and remarriage, have been compiled to show for each age and kind of pension the average amount (sometimes referred to as capitalized value) necessary to complete pension payments. When a pension is awarded this average amount is transferred from the Current Funds to the Pension Fund. All payments of pensions are made from the Pension Fund. Since the amount transferred in any one instance is the average amount required, no re-transfer is made should a residue be left at the expiry of the pension, nor is any additional transfer made should the amount be exhausted before expiry of the pension.

The balance in the fund at the commencement of 1946 was $37,295,585.05. During the year $6,708,444.80 was transferred for pension awards, $1,971,560.60 was added in interest and $3,536,806.30 was paid for pensions. The balance in the fund at the end of the year was $42,438,784.15.

Disaster Reserve

The Disaster Reserve is a fund set aside under the provisions of Section 101 (2) of the Act to meet any unforeseen disaster or other circumstance which might unduly burden the employers in any class of industry. The amount held for this purpose at December 31, 1946 was $909,997.41.

Second Injury Fund

The Second Injury Fund has been established to equalize the burden of added loss from second injuries. The amount held in this fund, December 31, 1946, was $30,331.40.

Investment Reserve

The Investment Reserve is made up of excess over book values when investments are sold, and of interest received but not allocated to deferred obligations: it is in the nature of a security reserve to protect the accident fund in the case of default on bond or interest payments and to guard against loss by reason of falling interest rates. The Reserve, December 31, 1946, amounted to $1,209,907.98.

Reserve for Compensation Deferred

The funds under "Compensation Deferred" comprise compensation moneys held for claimants, payment being deferred to a future time by reason of the claimant being a minor or for other reason. The amount so held as at December 31, 1946 was $224,776.98.

Silicosis Account

This reserve is to pay claims for silicosis in Class 5 which have been made but in which payments have not been made in full. The amount so held is $2,844,141.10.

Reserve to Complete Claims

All continuing claims were evaluated at the end of the year and the amount estimated to bring them to finality. Allowance was made for unreported and unadjusted claims. The total amount was $8,860,535.82, of which $1,481,062.38 was specifically for pneumoconiosis claims previously reported.

Contingent Reserve

During 1946 the Contingent Reserve, that is the amount allocated to take care of expected contingencies, decreased from $5,141,398.83 at the beginning of the year to $2,810,272.24 at the end of the year. The decrease is more apparent than real, being due to transfer from contingent to definite status, with a corresponding increase in other accounts and reserves.

Under the Act artificial appliances are provided for the life of the workman and this means, generally, several appliances for the one workman. Pensioners require medical aid for varying periods subsequent to pensioning, and sometimes for life. Workmen, not pensioned, also require medical aid, especially when their claims are reopened. On reopening claims payment of compensation must be made; and disabilities sometimes become greater with advancing age. There is an accruing burden of cost in industrial diseases, especially for pneumoconiosis and silicosis cases. Some pensions have been granted on wage loss and at some future date will be pensioned on the basis of disability. Future payments will be made for past cases for rehabilitation. To meet these contingencies of the future the Contingent Reserve has been established.

Operating Reserve

The Operating Reserve as explained above is that sum required to make provision for cash expenditures, as assessments are not payable at once at the beginning of the year, and in one sense is the surplus after all contingencies are considered. This Operating Reserve is calculated at 10 per cent. of assessments or $1,501,991.62.

From Commencement of Act

From January 1, 1915 when the Act first went into effect there have been 2,214,196 accidents reported to the Board, and $216,340,289.49 awarded as benefits.

Dated at Toronto this 13th day of March, 1947.

WILLIAM MORRISON, Chairman.
D. J. GALBRAITH, Vice-Chairman.
J. F. CAULEY, Commissioner.

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946

Schedule 1

RECEIPTS

Cash in Banks 1st January, 1946:		
Canadian Bank of Commerce	$ 9,462.66	
Royal Bank of Canada	42,186.23	$ 51,648.89
Net Assessments, Penalties, Etc.:		
Gross Assessments	$14,469,680.45	
Under Section 8	33,642.62	
Under Section 107	2,229.91	
Under Section 114	431.77	
From Department of Veterans Affairs	24,224.31	
From Accident Cost Refunds	2,391.45	
	$14,532,600.51	
Less: Assessments and Penalties Refunded	95,721.72	14,436,878.79
Silicosis Assessments	$ 371,468.06	
Less Refunds	290.31	371,177.75
Interest:		
Investments	2,139,318.01	
Exchange Premiums	5,427.96	
	$2,144,745.97	
Less: Interest on Bank Overdraft	14,691.49	2,130,054.48
Investments:		
Principal Returned — This includes net receipts only on exchange of certain investments		1,251,742.69
From Schedule 2 and Crown Employers:		
For Administration Expenses, account of prior year, paid out of Schedule 1 in 1945	$ 73,086.00	
Less: Refunded	19.50	73,066.50
		$18,314,569.10
Bank Overdraft—31st December 1946: Dominion Bank		930,104.95
		$19,244,674.05

PAYMENTS

Bank Overdraft—1st January 1946: Dominion Bank		$1,364,340.23
Compensation other than Pensions and Deferred Compensation		4,724,647.54
Pensions		3,536,806.30
Deferred Compensation		154,095.54
Rehabilitation		4,728.10
Medical Aid		2,328,934.94
Silicosis:		
Compensation	$207,135.93	
Medical Aid	30,014.70	
Expenses	81,803.38	318,954.01
Under Section 8		284.12
Mine Rescue Work		36,503.62
Administration and other expenses		1,024,127.91
Safety Associations		326,440.00
Clinic Expenses		125,116.14
Special Hospitalization: (Toronto General Hospital)	$111,240.00	
Less: Amounts received from Medical Aid and other Accounts	95,831.00	15,409.00
		$13,960,387.45
Investments: Securities for permanent investment— This includes net payments only on exchange of certain investments		5,209,097.06
Cash in Banks, 31st December 1946:		
Canadian Bank of Commerce	$ 19,809.61	
Royal Bank of Canada	55,379.93	75,189.54
		$19,244,674.05

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946—Continued

Schedule 2

RECEIPTS

Cash in Bank 1st January 1946:		
Imperial Bank of Canada ..		$ 89,307.24
Employers' Deposits under Section 28		528,576.99
Employers' Deposits under Section 32		1,598,368.31
Employers' Deposits for Claimants' Moneys		8,980.00
Interest:		
Investments	$154,186.61	
Exchange Premiums	135.50	
Bank Deposits..	484.76	
		154,806.87
Investments:		
Principal Returned—This includes net receipts only on exchange of certain investments		164,527.30
		$2,544,566.71

PAYMENTS

Claimants out of Deposits under Section 28		$ 397,871.83
Deposits returned to Employers under Section 28		1,766.93
Claimants out of Claimants' Moneys		9,000.87
Paid out of Deposits under Section 32:		
Compensation	$1,396,838.83	
Rehabilitation	306.38	
Medical Aid..	146,659.44	
		1,543,804.65
Deposits Returned to Employers under Section 32		23,356.50
Investments:		
Securities for permanent investment		374,391.87
Cash in Bank—31st December 1946		
Imperial Bank of Canada..		194,374.06
		$2,544,566.71

(This is the statement referred to in the Auditor's Certificate).

ANALYSIS OF ADMINISTRATION EXPENSES AND NON-ADMINISTRATIVE SERVICE OUTLAYS DURING 1946

	Administration Expenses	Non-Administrative Service Outlays	Total
Salaries of Board and Staff	$582,689.86	$102,524.82	$ 685,214.68
Travelling and Other Expenses of Board and Staff	77,856.25	6,021.78	83,878.03
Printing, Stationery and Office Supplies	41,358.41	4,927.81	46,286.22
Postage and Excise Stamps	58,701.89	....	58,701.89
Telephone, Telegraph and Express	3,474.71	3,046.75	6,521.46
Legal Expenses, Witness Fees, etc	....	437.71	437.71
Claimants' Travelling Expenses and Medical Examinations	....	155.33	155.33
Insurance and Security Service	6,165.54	3,896.98	10,062.52
Auditor's Services, under instructions of Attorney-General	....	2,650.00	2,650.00
Office Rent	40,579.13	....	40,579.13
Permanent Equipment	14,432.04	360.67	14,792.71
Miscellaneous Services, Equipment Rental and Repairs	7,671.87	1,413.12	9,084.99
Meals for Staff working overtime (nights, Saturday afternoons, etc.)	4,961.40	681.05	5,642.45
Contribution to Staff Pension Fund	....	55,950.56	55,950.56
	$837,891.10	$182,066.58	$1,019,957.68

Charged to Mine Rescue Work	$ 1,825.18
Charged to Silicosis Account	56,507.95
Charged to Special Hospital Account	5,562.00
Charged to Clinic Account	6,255,81
Charged to Safety Associations	16,322.00
Charged to Schedule 2 Employers	33,492.00
Charged to Dominion of Canada	34,175.50
Charged to Province of Ontario	3,904.50
Charged to Schedule 1 Employers	679,846.16
	$837,891.10

STANDING SCHEDULE 1 ACCIDENT FUND AS AT DECEMBER 31, 1946

ASSETS		
Cash in Banks:		
Canadian Bank of Commerce	$19,809.61	
Royal Bank of Canada	55,379.93	
		$ 75,189.54
Investments		59,504,176.08
Due for Administrative Expense:		
From Schedule 2 employers	33,492.00	
From Dominion of Canada	34,175.50	
From Province of Ontario	3,904.50	
		71,572.00
Assessments estimated to be due on adjustment of 1946 Pay Rolls		2,082,000.00
Accountable warrants held by members of Staff		8,459.05
Salary advances to members of Staff		40.00
Due from Staff for Canada Savings Bonds purchases, instalment plan terminating Oct. 15, 1947		19,406.98
		$61,760,843.65

LIABILITIES		
Compensation Awarded, payment deferred, other than pensions		$ 224,776.98
Pension Liability		42,438,784.15
Balance at Credit of Silicosis Account		2,844,141.10
Compensation and Medical Aid estimated outstanding		7,379,472.99
Estimated for Pneumoconiosis		1,481,062.83
Overdraft Dominion Bank		930,104.95
Assets in Excess of Liabilities:		
Disaster Reserve	$909,997.41	
Second Injury Fund	30,331.40	
Investment Reserve	1,209,907.98	
Contingent Reserve	2,810,272.24	
Operating Reserve	1,501,991.62	
		6,462,500.65
		$61,760,843.65

STANDING SCHEDULE 2 FUNDS AS AT DECEMBER 31, 1946

ASSETS		LIABILITIES	
Cash in Imperial Bank of Canada	$ 194,374.06	Balance Employers' Deposits:	
Investments	4,095,574.42	Under Section 28	$3,943,320.76
		Under Section 32	114,977.64
		Claimants' Moneys held by the Board	16,974.25
		Investment Reserve	214,675.83
	$4,289,948.48		$4,289,948.48

NUMBER OF ACCIDENTS IN 1945 INVOLVING PAYMENT

Class	Medical Aid Only	Temporary Disability	Permanent Disability	Death Cases	Total Cases
1	1,186	3,089	149	27	4,451
2	2,360	2,352	70	10	4,792
3	984	618	48	1	1,651
4	1,819	1,263	127	6	3,215
5	2,561	1,896	244	62	4,763
6	728	469	48	5	1,250
7	1,981	765	86	12	2,844
8	2,150	1,128	96	14	3,388
9	4,442	1,643	106	5	6,196
10	11,515	4,183	349	11	16,058
11	7,420	2,725	158	10	10,313
12	1,859	862	38	10	2,769
13	728	483	24	16	1,251
14	967	548	20	2	1,537
15	3,765	2,158	86	7	6,016
16	1,651	788	48	2	2,489
17	1,407	789	46	4	2,246
18	1,127	493	17	..	1,637
19	1,443	674	57	1	2,175
20	1,761	1,379	62	16	3,218
21	532	354	21	5	912
22	2,393	1,496	68	10	3,967
23	485	291	19	3	798
24	3,311	2,191	100	18	5,620
TOTALS	58,575	32,637	2,087	257	93,556
ST.	1	3,036	115	35	3,187
Crown	2,722	4,068	119	41	6,950
GRAND TOTALS	61,298	39,741	2,321	333	103,693

AUDITOR'S CERTIFICATE

14th February, 1947.

THE WORKMEN'S COMPENSATION BOARD OF ONTARIO.

Toronto, Ontario.

Dear Sirs:

I have completed a continuous audit of the books of the Board for the year ended 31st December 1946, and have obtained all the information and explanations I have required.

In my opinion, the attached statements of Receipts and Payments, Schedules No. 1 and No. 2 truly and fairly set forth the cash transactions of the Board for the year ended 31st December 1946.

Bank balances at the close of the period have been verified by direct communication with the Board's bankers.

The amortized book value of the investments held by the Board as at the above mentioned date was $63,599,750.50 and I confirmed by a physical examination the securities representing these investments as at that date. Debenture principal due and unpaid at the end of the period under review amounted to $73,762.27.

Respectfully submitted,

A. G. CALDER, F.C.A.,

Chartered Accountant.

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946

Schedule 1

RECEIPTS

CASH IN BANKS, 1ST JANUARY 1946:		
Canadian Bank of Commerce	$ 9,462.66	
Royal Bank of Canada	42,186.23	
		$ 51,648.89
NET ASSESSMENTS, PENALTIES, ETC.:		
Gross Assessments	$14,469,680.45	
Under Section 8	33,642.62	
Under Section 107	2,229.91	
Under Section 114	431.77	
From Department of Veterans' Affairs	24,224.31	
Accident Cost Refunds	2,391.45	
	$14,532,600.51	
Less: Assessments and Penalties Refunded	95,721.72	
		14,436,878.79
SILICOSIS ASSESSMENTS:	$ 371,468.06	
Less: Refunds	290.31	
		371,177.75
INTEREST:		
Investments	$ 2,139,318.01	
Exchange Premiums	5,427.96	
	$ 2,144,745.97	
Less: Interest on Bank Overdraft	14,691.49	
		2,130,054.48
INVESTMENTS:		
Principal Returned—This includes net receipts only on exchange of certain investments		1,251,742.69
FROM SCHEDULE 2 AND CROWN EMPLOYERS:		
For Administration Expenses, account of prior year, paid out of Schedule 1 in 1945	$ 73,086.00	
Less: Adjustments refunded	19.50	
		73,066.50
		$18,314,569.10
BANK OVERDRAFT—31ST DECEMBER 1946:		
Dominion Bank		930,104.95
		$19,244,674.05

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946

Schedule 1

PAYMENTS

BANK OVERDRAFT, 1ST JANUARY 1946:		
Dominion Bank		$ 1,364,340.23
COMPENSATION OTHER THAN PENSIONS AND DEFERRED COMPENSATION		4,724,647.54
PENSIONS		3,536,806.30
DEFERRED COMPENSATION		154,095.54
REHABILITATION		4,728.10
MEDICAL AID		2,328,934.94
SILICOSIS:		
Compensation	$ 207,135.93	
Medical Aid	30,014.70	
Expenses	81,803.38	
		318,954.01
UNDER SECTION 8		284.12
MINE RESCUE WORK		36,503.62
ADMINISTRATION AND OTHER EXPENSES		1,024,127.91
SAFETY ASSOCIATIONS		326,440.00
CLINIC EXPENSES		125,116.14
SPECIAL HOSPITALIZATION:		
Toronto General Hospital	$ 111,240.00	
Less: Amounts received from Medical Aid and other Accounts	95,831.00	
		15,409.00
		$13,960,387.45
INVESTMENTS:		
Securities for Permanent Investment—This includes net payments only on exchange of certain investments		5,209,097.06
CASH IN BANKS—31ST DECEMBER 1946:		
Canadian Bank of Commerce	$ 19,809.61	
Royal Bank of Canada	55,379.93	
		75,189.54
		$19,244,674.05

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946

Schedule 2

RECEIPTS

CASH IN BANK, 1ST JANUARY 1946:		
Imperial Bank of Canada		$ 89,307.24
EMPLOYERS' DEPOSITS UNDER SECTION 28		528,576.99
EMPLOYERS' DEPOSITS UNDER SECTION 32		1,598,368.31
EMPLOYERS' DEPOSITS FOR CLAIMANTS' MONIES		8,980.00
INTEREST:		
Investments	$ 154,186.61	
Exchange Premiums	135.50	
Bank Deposits	484.76	
		154,806.87
INVESTMENTS:		
Principal Returned—This includes net receipts only on exchange of certain investments		164,527.30
		$ 2,544,566.71

STATEMENT OF RECEIPTS AND PAYMENTS DURING 1946

Schedule 2

PAYMENTS

CLAIMANTS OUT OF DEPOSITS UNDER SECTION 28		$ 397,871.83
DEPOSITS RETURNED TO EMPLOYERS UNDER SECTION 28		1,766.93
CLAIMANTS OUT OF CLAIMANTS' MONIES		9,000.87
PAID OUT OF DEPOSITS UNDER SECTION 32:		
Compensation	$ 1,396,838.83	
Rehabilitation	306.38	
Medical Aid	146,659.44	
		1,543,804.65
DEPOSITS RETURNED TO EMPLOYERS UNDER SECTION 32		23,356.50
INVESTMENTS:		
Securities for permanent investment		374,391.87
CASH IN BANK—31ST DECEMBER 1946:		
Imperial Bank of Canada		194,374.06
		$ 2,544,566.71

ONTARIO
DEPARTMENT OF AGRICULTURE

REPORT

OF THE

ONTARIO VETERINARY COLLEGE

1945

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ONTARIO

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1946

REPORT OF THE ONTARIO VETERINARY COLLEGE

To The Honourable T. L. Kennedy,

Minister of Agriculture

Sir,—

I have the honour to present herewith, the report of the Ontario Veterinary College for the year extending from April 1, 1945 to March 31, 1946.

My predecessor, Dr. C. D. McGilvray, terminated his period of service as principal after twenty-seven years of loyal, faithful service.

STUDENT ENROLLMENT

During the academic year 1945-46 at the Ontario Veterinary College, two hundred and thirty-seven students have been in attendance. One hundred and twenty-six of this number were war veterans. As in the past, students have enrolled from all parts of Canada. Their distribution by provinces is as follows: Ontario—158, Saskatchewan—18, Alberta—17, Manitoba—13, British Columbia—12, Quebec—5, Prince Edward Island—4, Nova Scotia—3, New Brunswick—2. In addition there are four students from other parts of the British Commonwealth, namely two from British Guiana, one from Jamaica, and one from England.

The average age of the students in attendance is 24.6 years. There are eight female students in attendance. Since June last, we have not accepted female students, due to the large number of applicants who have served in His Majesty's forces.

Certain structural changes in the present College building were necessitated by the unprecedented number of veteran candidates admitted to the first year class. A section of the freshmen class commenced the course of instruction October 2, 1945. B. section consisting of 40 veterans commenced January 7, 1946. This latter group will complete their first year course of instruction, June 30.

DEGREE OF DOCTOR OF VETERINARY MEDICINE

The senate of the University of Toronto approved a change of degree conferred upon graduates on the successful completion of the course at the Ontario Veterinary College. The graduating class (1946) received the degree, Doctor of Veterinary Medicine, D.V.M.

Graduates of the Ontario Veterinary College, holding the degree, B.V.Sc., (Bachelor of Veterinary Science), can make application to the Registrar, University of Toronto, for the new degree, Doctor of Veterinary Medicine. Such applicants surrender all rights to the use of the degree, Bachelor of Veterinary Science. A fee of ten dollars must accompany the application.

The entrance requirements were raised, both for civilians and veterans, and the college fees were increased slightly. The entrance requirements, fees and college rules are outlined later in this report.

INSTRUCTIONAL STAFF

Dr. A. A. Kingscote and Dr. A. F. Bain returned from service in His Majesty's forces and have resumed their respective duties in charge of Parasitology and Bacteriology. Dr. H. J. Griffiths was appointed to the Staff as assistant to Dr. Kingscote in the Department of Parasitology and Fur-Bearing Animals. Two new members were added to the teaching staff; Dr. J. P. W. Gilman—Histology and Embryology, and Dr. C. A. V. Barker—Breeding Hygiene. Assistance was obtained from the following on a per lecture basis; Dr. M. C. Dinberg, Provincial Pathologist, Ontario Department of Health—Histology; Professor R. Birdwhistell, University of Toronto—Human Geography; Dr. D. S. Puffer, Assistant to the Chief Medical Officer of Health—Public Health; Dr. L. Little—Public Health; Dr. A. E. Berry—Sanitary Engineering. Dr. G. L. Bannister left the College Staff for service with U.N.N.R.A. in China for a period of two years. Dr. Bannister seeks further experience in communicable disease problems. It is expected that he will rejoin our staff in two years' time.

The Staff has been heavily taxed due to the large number of students. It has been found necessary to divide the first year class; instruction and laboratory periods, therefore, were given separately to the two sections. Furthermore, the marked limitation of space has hampered the progress of scientific investigation. The addition of the new wing under plan at the present time will alleviate this condition to some degree. However, this college will require an additional small building for scientific research and virology. This institution is also in need of further visual equipment for teaching purposes by way of lantern slides and film. A start has been made on the procurement of this equipment.

CURRICULUM

The curriculum has been revised slightly. Additional time was allotted to Biochemistry and Physiology. In the first year class, instruction in two subjects, namely Pharmacy and Human Geography, has been added. In the second year class, a course in Nutrition is given by Professor Evans of the O.A.C., Department of Nutrition. In the third year class, a course of instruction in Swine Diseases is given, apart from the general course in Diseases of Cattle, Sheep and Swine. A separate twelve hour course has been given to Haematology. In the final (fourth) year class, the periods usually allotted to the subject Meat Hygiene, were revised this year so that instruction included meat and other edible products; in consequence the course is now termed Food Hygiene. Changes were made in the instruction given in Communicable Diseases. In order to eliminate overlapping, communicable diseases of horses were taught by the professor lecturing on equine diseases and communicable diseases of cattle by the professor lecturing on cattle diseases. The subject Reportable Diseases, consisted solely of instruction in diseases which are reportable under the Animal Contagious Diseases Act. Furthermore, the final year students received a lecture and clinical course in Artificial Insemination of 57 hours instructional time. In the twenty-nine lecture periods devoted to teaching in Public Health we have concluded a course of lectures in Public Health Bacteriology. Human Communicable diseases, also environmental sanitation and recreational sanitation. In the Bacteriology course, twelve hours were devoted to instruction and demonstrations in Virology.

DEPARTMENT OF EXTENSION

The facilities and staff of this department have grown considerably during the last few years; in consequence the activities and range of services offered have greatly increased.

The department is divided into several divisions dealing with the major agricultural problems relating to Veterinary Medicine. Separate diagnostic laboratories are maintained by the department to deal with Mastitis, Bang's Disease (Contagious Abortion), Poultry Diseases, Swine Diseases and Diseases of Fur Bearing Animals. A separate division also deals with breeding problems. A small biological laboratory is maintained for making vaccines, sera and other preventive biological products, as and when they are needed for the work of the department.

The department, in the capacity of consultant, maintains close co-operation with the practising veterinarians throughout the province. In districts where there are no practising veterinarians available, members of the departmental staff deal directly with the Agricultural Representatives and breeders of the district. Last year members of the staff addressed over sixty meetings. The presentations made at these meetings included disease control problems in poultry, cattle, swine, and fur-bearing animals. In the control of Brucellosis, a province-wide calfhood vaccination programme was instituted. A third project undertaken is the intradermal method of inoculation to determine its benefits, if any, over the subcutaneous method. Furthermore, the merits of different methods of preparing vaccine are being surveyed.

The mastitis laboratory has been busily engaged and at present is undertaking a survey in the milk sheds of one city. In the immediate future a second survey will be undertaken in another city. In the department of parasitology, a project is being undertaken in the control of parasitism amongst sheep on Manitoulin Island, as well as several other investigational projects including a study of the toxicity of DDT. In the poultry laboratory, seven to eight hundred birds are received monthly. Several investigational projects are under way.

During the past year several new members have been added to the staff of the Extension Department to facilitate maintenance and extension of the services mentioned above; these include Dr. N. A. Fish in the Serological Laboratory, Dr. D. A. Barnum, the Mastitis Laboratory, and Dr. A. MacKinnon, who has been engaged in both laboratory and field investigational studies. A. G. Stewart, M.A., biochemist, has been added to our extension branch staff.

SUBSIDIZED VETERINARY UNITS

The Department has assisted three municipalities in Northern Ontario in the establishment of veterinary units, namely, Kenora, Algoma, and New Liskeard, whilst preparatory organization work for the establishment of further units has already been started.

On behalf of the members of the Faculty I wish to express appreciation of the kind consideration and co-operation given by the Honourable the Minister, the Deputy Minister and senior officers of the Department of Agriculture throughout the year.

All of which is respectfully submitted.

Guelph, Ontario,
March 31, 1946

A. L. MacNabb
Principal

DEPARTMENT OF EXTENSION

MASTITIS LABORATORY

F. W. Schofield, V.S., D.V.Sc.

A program having the dual purpose of an investigation and an extension service for the control of bovine mastitis was a major project in this department during the past year. Total number of milk samples received for laboratory examination was 5,836. Between April and October, 1945, when the technical methods for a large scale laboratory service were being developed, we examined 1,515 milk samples. In November, 1945, the laboratory staff was increased and the extension service was enlarged. From November, 1945, to March, 1946, we received and examined 4,123 milk samples which gave the following findings:

Streptococcus agalatiae	979
Streptococcus uberis	100
Staphylococcus aureus	163
Corynebacterium pyogenes	25
Escherichia coli	17
Aerobacter aerogenes	4
Pasteurella multocida	2
Streptococci other than mastitis strains	828
Negative for mastitis organisms	2,005

HERD BACTERINS

Continuing our observations on the use of herd bacterins in the control of mastitis as recorded in last year's report, we prepared 40 antogenous bacterins this year. The results obtained so far are in agreement with those reported last year.

PENICILLIN DETERMINATIONS

Numerous estimations of the penicillin content of milk from infused udders have been made.

Some observations made in the investigational aspect of our work on mastitis were published in the March, 1946, issue of the Canadian Journal of Comparative Medicine. (Penicillin in the Treatment of Bovine Mastitis, by F. W. Schofield). The following are our conclusions reprinted from this paper.

1. That *Streptococcus agalatiae* infection of the bovine udder may be resistant to penicillin when given in a unitage and frequency sufficient to produce a reasonable level of inhibition. (No penicillin resistant strains have so far been encountered.)
2. That acute mastitis, when due to either *Staphylococcus aureus* or *Corynebacterium pyogenes*, shows moderate clinical improvement only, when treated with penicillin, unless the treatment is commenced immediately after the infection is established. With immediate treatment, the results may be highly satisfactory.
3. That the best results are obtained when an inhibitory level of penicillin is maintained for three consecutive days.

4. That there is evidence to show that *Streptococcus agalactiae* is more resistant to penicillin in acute outbreaks of mastitis than when the organism is present in the udder unaccompanied by any clinical manifestations of disease.

SEROLOGY (BRUCELLA LABORATORY)

N. A. Fish, D.V.M., D.V.P.H.

PREPARATION AND DISTRIBUTION OF BRUCELLA ANTIGEN

Seven thousand, seven hundred and fifty-nine test doses of Br. abortus tube antigen were distributed to qualified veterinarians for the agglutination test for Brucellosis.

AGGLUTINATION TESTS

During the past year 99,152 blood samples were received at the laboratory which were submitted to the agglutination test for Brucellosis. This is an increase of 14,458 blood samples as compared to the previous year. Included in this number are samples from cattle intended for export or exhibition purposes, from calves in herds under supervised calfhood vaccination, and from cattle in herds in prescribed areas as well as routine testing of individual herds. Samples were also received from the herds at the Ontario Hospital farms, and from herds under experimental adult vaccination. The results of these tests are shown in the table below.

BLOOD SAMPLES RECEIVED
for the Fiscal Year ending March 31, 1946

Test Groups	Blood Samples Rec'd	Positive Samples		Doubtful Samples		Negative Samples		Samples Broken or Hemolysed	
	No.	No.	%	No.	%	No.	%	No.	%
Routine Tests	55,237	11.797	21.36	3,567	6.46	39,426	71.37	447	.81
Calfhood Vaccination	27,070	23.368	86.32	1.324	1.89	2,041	7.54	337	1.25
Area Plan	6.737	204	3.03	270	4.01	6.191	91.89	72	1.07
Export	8,523	301	3.53	391	4.59	7.816	91.70	15	.18
Experimental Adult Vaccination	1.066	712	66.79	48	4.50	304	28.52	2	.19
Ontario Hospital Farms	519	92	17.73	37	7.13	389	74.95	1	.19
Totals	99,152	36.474	36.77	5,637	5.69	56.167	56.66	874	.88

ROUTINE TESTING OF INDIVIDUAL HERDS

This service is available for the blood testing of individual herds by practicing veterinarians. The blood samples are submitted to the Brucella laboratory by the veterinarians where the agglutination test is performed and interpreted.

EXPORT SAMPLES

Provision is also made whereby blood samples can be drawn by accredited veterinarians from animals intended for export or exhibition and forwarded to this laboratory for an official agglutination test. As shown by the table, 8,523 have been received and interpreted.

PRESCRIBED AREA TESTING

Supervised blood testing of herds in prescribed areas continues. During the past year, 6,737 samples from cattle composing 262 herds have been subjected to the agglutination test for Brucellosis. The results of the agglutination tests on these samples are shown in the table.

SUPERVISED CALFHOOD VACCINATION

Progress continues to be made on supervised calfhood vaccination. At present 6,291 herds are under supervision, an increase of 2,073 as compared to the previous fiscal year. A total of 39,798 calves representing additions to the above herds have been vaccinated with a live vaccine prepared from Brucella abortus strain 19, and supplied free of charge by the Veterinary College to qualified registered veterinarians in this province. Since supervised calfhood vaccination was inaugurated a total of 92,401 calves have been vaccinated with vaccine prepared and distributed by the College.

POULTRY DISEASES LABORATORY SERVICE

J. S. Glover, V.S., D.V.M.

This consists chiefly in the routine examinations of poultry sent or brought to the laboratory. The number of specimens received during the past year, and the conditions found, are shown in the following list:

Nature of Case	Number of Cases
Pullorum	718
Omphalitis	225
Pullorum and Omphalitis	67
Pullorum and Ascariasis	5
Pullorum and Tuberculosis	2
Pullorum and Coccidiosis	3
Pullorum and New Wheat Poisoning	2
Pullorum and Staphylococcosis	1
Pullorum and Dermatitis	5
Pullorum and Ruptured Liver	1
Pullorum and Capillaria Infestation	1
Pullorum and Visceral Lymphomatosis	1
Pullorum and Riboflavin Deficiency	2
Pullorum and Vitamin A Deficiency	3
Pullorum, Taeniasis and Roup	1
Omphalitis and Congenital Gout	23
Omphalitis and Coccidiosis	4
Congenital Gout	1

Nature of Case	Number of Cases
Visceral Lymphomatosis	190
Visceral Lymphomatosis and Ruptured Liver	1
Visceral Lymphomatosis and Fowl Pox	1
Visceral Lymphomatosis and Coccidiosis	2
Visceral Lymphomatosis and Taeniasis	2
Visceral Lymphomatosis and Ascariasis	7
Visceral Lymphomatosis, Taeniasis and Ascariasis	5
Visceral Lymphomatosis and Roup	1
Visceral Lymphomatosis and Pediculosis	1
Visceral Lymphomatosis, Taeniasis, Ascariasis and Coccidiosis	1
Osteopetrotic Lymphomatosis	2
Ocular Lymphomatosis and Taeniasis	1
Coccidiosis	447
Coccidiosis and Ascariasis	18
Coccidiosis and Taeniasis	2

Nature of Case	Number of Cases
Coccidiosis and Capillaria Infestation	2
Coccidiosis, Ascariasis and Taeniasis	1
Coccidiosis, Ascariasis and Capillaria Infestation	1
Coccidiosis, Taeniasis and Capillaria Infestation	4
Coccidiosis and Sinusitis	1
Coccidiosis, Ascariasis and New Wheat Poisoning	1
Coccidiosis and Enterohepatitis	7
Coccidiosis and Pediculosis	1
Coccidiosis and Dermatitis	22
Coccidiosis and Coryza	1
Coccidiosis and Impacted Oviduct	1
Enterohepatitis	46
Enterohepatitis and Staphylococcosis	1
Enterohepatitis and Ruptured Oviduct	1
Staphylococcosis	35
Tuberculosis	37
Trichomoniasis	2
Hexamitiasis	3
Ornithostrongylosis	1
Laryngotracheitis	8
Pasteurellosis	11
Enteritis (Cause not determined)	74
Pericarditis	2
Pneumonia	19
Tumours	19
Ruptured Liver	18
Ruptured Oviduct	21
Ruptured Gut	1
Roup and Coryza	10
Injuries	25
Pullet Disease	4
Fowl Pox	15
Angiomatosis	1
Tracheitis	1
Paratyphoid	2
Laryngotracheitis and Roup	7
Impacted Gizzard	24
Impacted Gut	9
Impacted Oviduct	4
Impacted Crop	1
Eversion of Cloaca	18
Subcutaneous Emphysema	1
Egg Bound	3
Torsion of Gut	1
Beak Necrosis	2
Chemical Erythema	2
Bumblefoot	1
Mouldy Grain Poisoning	1
New Wheat Poisoning	3
Coal Gas Poisoning	6
Favus	2
Ascites	1
Taeniasis	68
Ascariasis	76
Capillaria Infestation	37
Taeniasis and Ascariasis	28
Ascariasis and Capillaria Infestation	13
Taeniasis, Ascariasis and Capillaria Infestation	1
Taeniasis, Ascariasis and Ruptured Oviduct	1
Taeniasis, Ascariasis and Coryza	1
Taeniasis, Ascariasis and Fowl Pox	1
Taeniasis and Roup	1
Ascariasis and Roup	1
Ascariasis and Eversion of Cloaca	1
Ascariasis and Ruptured Oviduct	2
Ascariasis, Capillaria Infestation and Ruptured Liver	1
Ascariasis and Coryza	1
Capillaria Infestation and Ruptured Liver	1
A Avitaminosis	467
D Avitaminosis	153
E Avitaminosis	7
Riboflavin Deficiency	80
Thiamin Deficiency	20
Dermatitis	56
Nutritional Conditions in Addition to Above	158
No Evidence of Disease or Putrid	223
Total	3.629

PREPARATION AND DISTRIBUTION OF FOWL POX VACCINE

216,625 doses of vaccine were prepared and distributed for the vaccination of poultry by the *Johnson Stick Method* for the prevention of *Fowl Pox*.

DISTRIBUTION OF PIGEON POX VACCINE

10.500 doses were distributed for use in flocks where cases of Fowl Pox had occurred in a pen. This vaccine was not prepared here.

DISTRIBUTION OF INFECTIOUS LARYNGOTRACHEITIS VACCINE

57,600 doses were distributed for the vaccination of poultry for the prevention of laryngotracheitis. This vaccine was not prepared here.

REPORT ON SWINE DISEASES

C. E. Phillips, V.S., D.V.M.

Infectious rhinitis in swine (Bull Nose), has assumed major proportions in Ontario, and is continuing to spread at an alarming rate.

This is an atrophic rhinitis, in many cases characterized by distortion of the nasal bones, a disappearance of the turbinates and ethymoid bones (softer structures), secondary pneumonias, and in all cases retarded growth. Whereas the average shoat should market within 200 days (about 7 months), rhinitis infected pigs take from 7 to 10 months depending upon the type of head and the extent of the damage. The larger amount of food and labour required makes the raising of rhinitis pigs extremely uneconomical.

The high incidence of carrier animals and the tendency of some swine breeders to dispose of shoats at community sales to unsuspecting purchasers before observable lesions show up, coupled with the breeding sow and boar carrier problem has facilitated the spread of this infection. It is evident that the majority, if not all animals raised on infected premises, whether or not they show observable lesions will spread the infection.

While the majority of infected herds are centered in and around Waterloo and Wellington counties, we have observed the infection in Victoria, Middlesex and District of Temiskaming and believe that it is undiagnosed elsewhere.

It should be kept in mind that not all infected animals show observable nasal damage, a fact which makes the inspection of a single breeding animal for introduction into a herd, an impractical method of control. The entire herd must be inspected for infection and even then the presence of rhinitis may not be detected due to the fact that it takes from six months to one year for the disease to become well established in a herd.

The literature would indicate that this is not a new condition, having been present in Denmark and Germany for over 100 years; however, although some investigational work has been conducted in Europe, the actual cause has not, up to the present been established.

It is interesting to note that an article from Sweden by Thunberg and Carlström reports the spread of an infection similar to that in Ontario and as reported from the Western provinces. According to this report the infection was introduced into Sweden's breeding stock and has spread over the entire country in a ten year period. Through the medium of various breeding experiments they excluded the theory of heredity as the main etiological factor, which view had been held by many of the earlier workers in opposition to that of a possible infectious cause.

A paper on Infectious Rhinitis of Swine, constituting a report of the disease in Ontario and the results of the investigational work undertaken at this college up to that time, was presented at the Ontario Veterinary Association meeting at Niagara Falls, January 25, 1946. This paper was also published in the Canadian Journal of Comparative Medicine, February, 1946.

Laboratory and field investigational studies have been undertaken during the past year on various aspects of the infection:

(a) The incubation period.

(b) The incidence of carrier state.

(c) The interim time lapse between damage to the nasal membranes from the time of exposure.

(d) Causative agent or agents.

Through the co-operation of the Agricultural Representative office, swine herds have been available for field investigational studies. At the college a small laboratory has been set aside for the studies of swine diseases and an experimental swine hoggery has about reached completion, in which investigational work will be continued.

In addition to the above, diagnostic and investigational work has been carried out and presentations of papers have been made at breeders' meetings. Furthermore the diagnostic facilities of the College on porcine infections have been considerably utilized by both veterinary practitioners and swine breeders as indicated in the following table.

PORCINE AUTOPSY REPORT, 1945-46

Nature of Case	Number of Cases
Enteric Disorders	
Necrotic Enteritis	19
Salmonellosis	26
Hemorrhagic Enterities	4
Enterites	38
Constipation	9
Impacted Stomach	5
Gastro-enteritis	33
Gastritis	8
Ruptured Intestine	3
Intestinal obstruction	1
Entero-toxemia	15
Scours	3
Excess Iron	8
Pneumonias	
Pasteurella	16
Pasteurella and Streptococci	6
Pasteurella and bronchisepticus	9
Bronchisepticus	16
Diptheriod	5
Pneumonia (unclassified)	26
Mechanical pneumonia	2
Streptococci	8
Influenza	7
Post-farrowing pneumonia	2
Miscellaneous	
Rhinitis	15
Toxic Sow milk	13
Staphylococci septicaemia	1
Joint ill	2
Peritonitis	4
Abscess	3
Erysipelas	1
Swine Pox	2
Tetanus	1
Anaphylaxis	1
Necrophorus (sore mouth)	2
Nutritional	15
Anaemia	6
Riboflavin deficiency	1
Emaciation	2
Injury	1
Ascarids	2
Lung worm	1
Nodular worm	1
Warts	2

NOTE.—The numbers listed in this table are not necessarily indicative of the actual numbers of animals infected or fatalities due to the different conditions.

The following are prints of photographs taken at the Ontario Veterinary College and illustrate various stages of the development of rhinitis in pigs that have been under pathological study at this college.

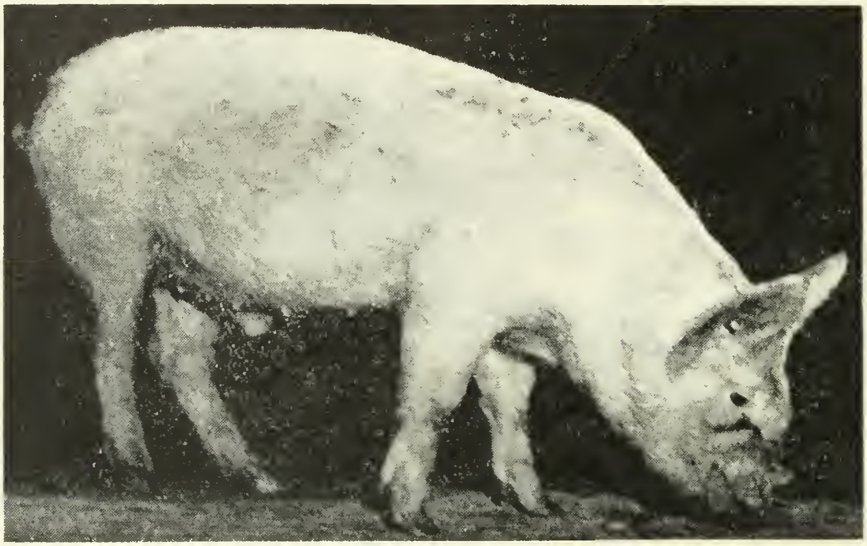

Fig. 1. Rhinitis pig, age $3\frac{1}{2}$ months. Note wrinkled snout and dark area below the eye.

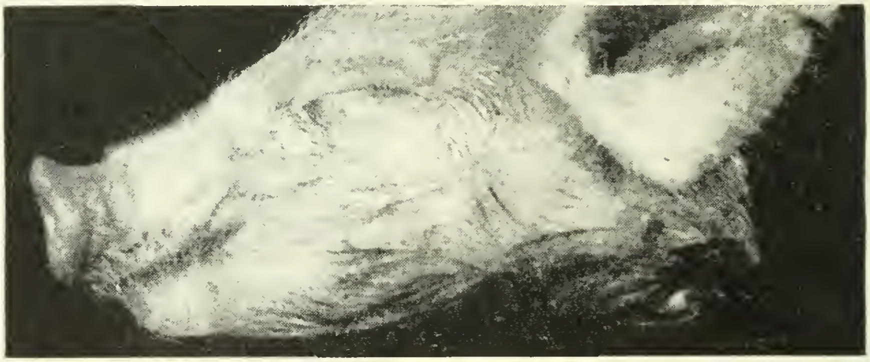

Fig. 2. Nose showing little distortion.

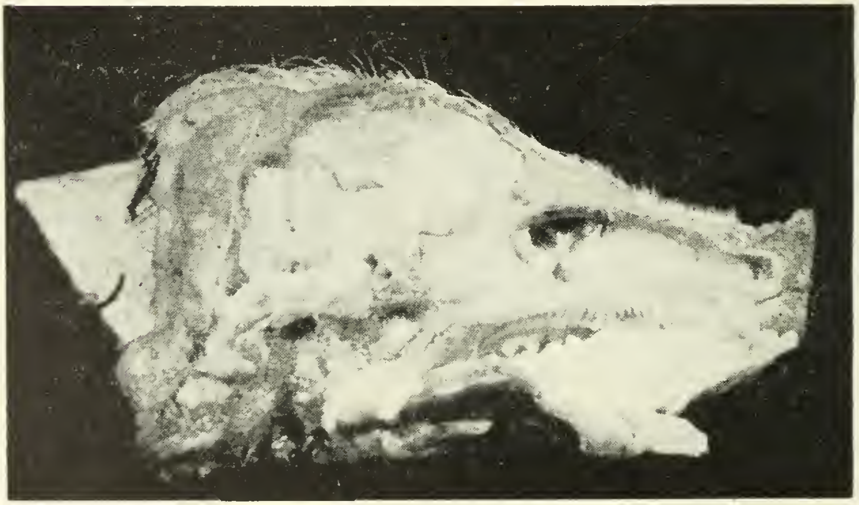

Fig. 3. Cross section of Fig. 2 showing destruction of turbinates and ethmoid bone.

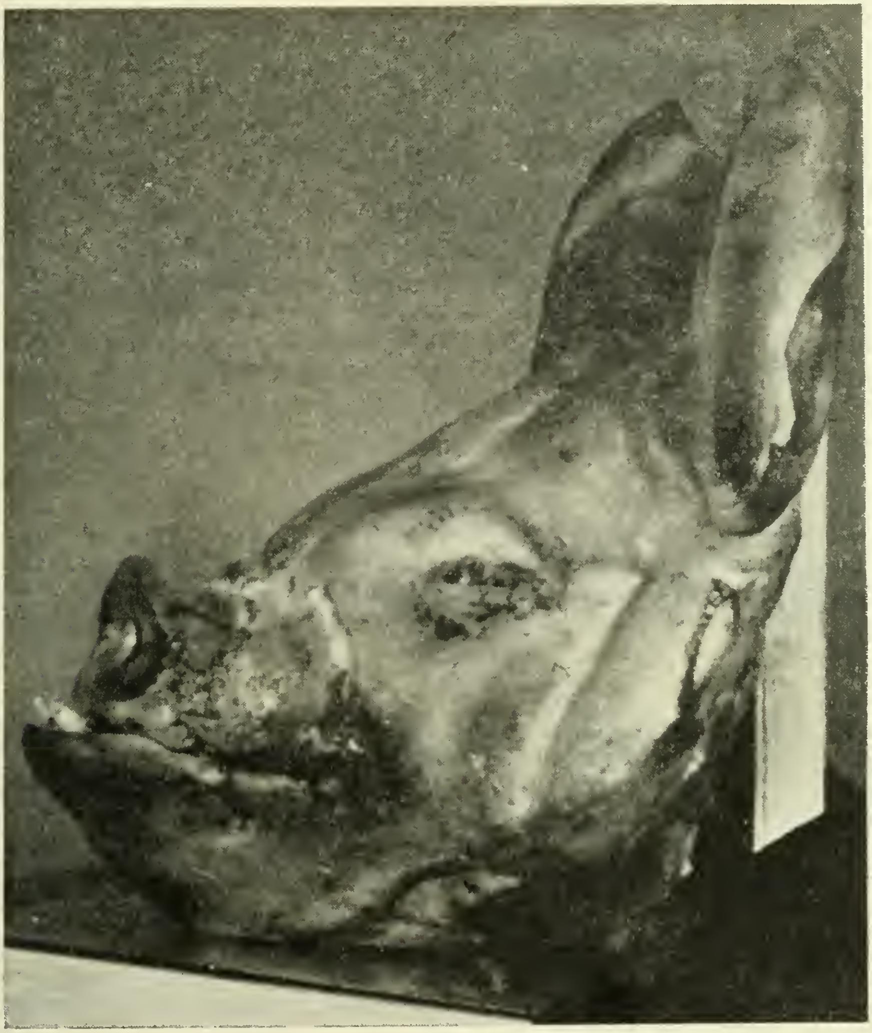

Fig. 4. Head of medium short nosed type showing damage.

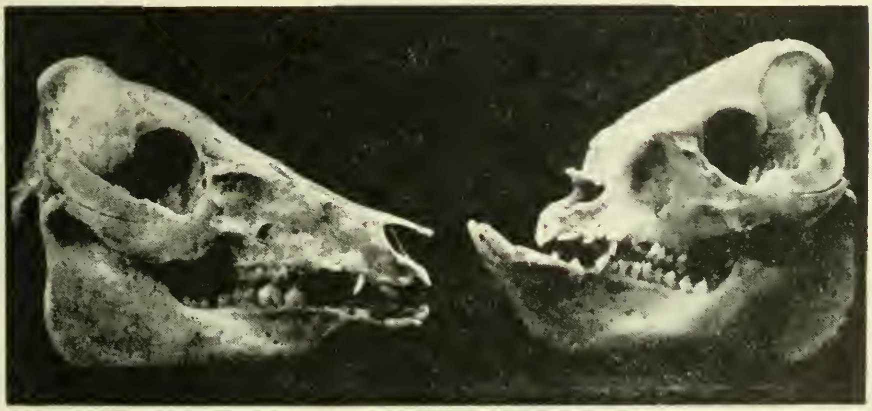

Fig. 5. Skull of normal and medium nosed pig showing distortion of nasal bones.

DEPARTMENT OF ANATOMY

V. R. Brown, D.V.M.

Herewith I present the annual report for the Anatomy Department for the year 1945–46.

Because of the large classes instructional work has consumed the greater portion of our time. Additional assistance has been provided by Dr. J. Ballantyne, Dr. D. Garrick and Dr. B. J. McSherry. Only the latter is, at present, with the department. There is great need of one full-time assistant and one part-time demonstrator during the College session.

The total number of students enrolled in this course was 182, composed of the first and second year classes. Each student would normally get twelve hours per week of anatomy instruction but due to the large size of the first year class it was necessary to divide it into two sections and consequently the time was halved, giving six hours per week per student. It is not possible for us to properly cover the subject with this limited number of hours and, furthermore, from the students' point of view it is impossible to assimilate and keep up with this course along with others where time is equally short and instruction given in the same tempo.

In order to cover the subject in the allotted hours, laboratory guide sheets were prepared and multigraphed. These serve as directions for dissection as well as notes for study. Thus it was possible to cut down on the number of lecture periods. The instruction so far completed deals with the horse, ox and dog. A number of outline drawings are included in the above and the student, while dissecting, fills in the detail thus making valuable notes for later review.

Investigational work has been carried on in a limited way. Most of the studies undertaken will require several years to complete because of the difficulty in obtaining specimens of the stages of development. The Department of Fur Bearing Animals has kindly turned over to us specimens of ova, embryos, feti and adult foxes and mink after post mortem examinations were completed. This is much appreciated and we hope to eventually obtain specimens of all stages in the development of these animals. The specimens received are carefully preserved for present or future study.

During the pelting season last fall, data were collected relative to average body weights and measurements, ratio of body weight to pelt weight, measurements and capacities of the various parts of the respiratory, digestive and urogenital systems of both sex of mink. This work is based on examination of over one hundred specimens, many of which were preserved for further study.

During the winter and spring considerable work has been done on the osteology, myology and splanchnology of normal mink. Photographs and line drawings were made as each region was worked over.

A number of casts to show the circulation in the kidneys, livers, spleens, feet and cephalic parts of horses, cattle and dogs were prepared by making injections of coloured liquid plastic solution into the arteries and veins. The part was then immersed in concentration hydrochloric acid to digest off the tissues thus leaving an accurate model of the vessels. These are valuable for teaching and we hope to eventually complete a collection from all animals.

We have been fortunate to receive from practitioners a number of bovine monstrosities for anatomical studies. To date there are in our collection several two-headed monsters, two with ectocordis, two with congenital body fissures, one schistocephalus bifidus and one with absence of fore limbs. In the case of the latter, the right fore limb was represented by only a small flap of skin and the left was nine inches long and quite rudimentary. These specimens have been dissected, photographed and the date recorded. The most interesting parts are preserved for future study and as permanent specimens.

DEPARTMENT OF HYGIENE (BACTERIOLOGY)

A. F. Bain, V.S., B.V.Sc.

The department is mainly employed in teaching. Students of the third and fourth years are instructed in bacteriology by lectures and in the laboratory. During the past academic year the laboratory time allotted to bacteriology has been increased. The additional time has been used for increased instruction in serology and immunology.

In addition to teaching, the department conducts routine examinations of specimens submitted for bacteriological diagnosis. A summary of the specimens examined during the past year is appended:

	Cattle	Sheep	Horses	Swine	Dogs	Cats	Mink	Fox	Rabbits	
Past. Infection	8	1		5					2	16
Past. and Streptococcus Infection				1						1
Bronchisepticus Infection				1						1
C. pyogenes Infection	3	1		1	1				1	7
Pyelonephritis	4									4
Streptococcus Infection	2		3		1					6
Influenza				1						1
Calf Septicaemia	2									2
Salmonella Infection	4			2			1	2		9
Necrotic Enteritis				1						1
Scours	4									4
Calf Pneumonia	6									6
Anaemia				1						1
Blackleg	4									4
Cl. Septique Infection	1									1
Actinomycosis	4									4
Actinobacillosis	3									3
Pulpy Kidney		1								1
Bang's Disease	2									2
Fistulous Withers			3							3
Mastitis	12									12
Necrophorus Infection	1								1	2
Distemper					1		1			2
Malignant Catarrh	1									1
Feline Enteritis						2				2
Granular Vaginitis	2									2
Warts	2		1							3
Parasitism		3			2					5
Miscellaneous	27	3	3	2	8		3	2	1	49
										155

DEPARTMENT OF HISTOLOGY

G. P. W. Gilman, V.S., B.V.Sc.

The work of this department consists almost exclusively of teaching histology and embryology to first and second year students. The total number of under-graduates taking instruction in this department during the current year, was 182. Each student received 5 hours lecture and laboratory work per week during the Fall term and 4 hours during the Winter term. Dr. Dinberg, Provincial Pathologist lectured for 2 two-hour periods a week, his services being loaned by the Ontario Department of Public Health, during the academic year (October to April inclusive.)

Due to the lack of space in the main Veterinary College building, a temporary laboratory was set up in the Dairy building of the O.A.C. Because of the abnormally large classes it was found impossible to give each student the individual attention in his laboratory work that he should have received. This year in order to attempt to offset the above mentioned handicaps and due to the lack of a much needed full time demonstrator to help in laboratory instruction, extensive use had to be made of medecrome lantern slides, models and prepared demonstrations.

During the year a certain number of histological sections were prepared by the department, however almost the whole histology slide library needs replacing. For this and other work a technician is badly needed. Also the lack of a separate work laboratory and permanent fixtures has hampered to a great extent this line of work.

A very limited amount of investigational work was started this winter in the field of genetics. This work concerns the study of hereditary abnormalities and congenital malformations in swine. As the problems being pursued are in the nature of long range projects, conclusive results are not expected for several years.

Co-operation has been extended to the other departments when it has been requested or required. In particular contact has been maintained with the departments of Anatomy, Physiology and Pathology.

DEPARTMENT OF MEDICINE

R. A. McIntosh, B.V.Sc., M.D.V.

The work of this department consists in teaching materia medica, therapeutics, diseases of cattle, sheep, and swine, obstetrics and breeding hygiene, and the application of all means medicinal, surgical or otherwise for the prevention, treatment and control of such conditions. There is also a considerable amount of extension work in the form of investigational visits to determine the nature and cause of outbreaks of disease and, upon occasions, in a consultant capacity with practicing veterinarians.

During the summer of 1945, Dr. C. D. McGilvray, the former principal of the Veterinary College, retired and Dr. A. L. MacNabb was appointed to the position. Following Dr. MacNabb's appointment, F. E. Wagner was added to the staff to teach the subject of pharmacy and C. A. V. Barker to teach obstetrics, breeding hygiene, and assist with clinical work in cattle, sheep, and swine. C. E. Phillips took over the lectureship on diseases of swine and also did a considerable amount of investigational work in connection with outbreaks of disease in that species of animal. While this assistance spread the work of the department somewhat, nevertheless, owing to the increase in the size of the freshmen and sophomore classes, and the fact that elementary clinical instruction was given to these classes, the amount of work was not reduced. This department also has the responsibility of the veterinary service required for the livestock of the Ontario Agricultural College.

In connection with the clinical material handled by this department, a survey of the records reveals that there were 152 cattle cases in the clinic. Of this number, 42 were representative of conditions and services rendered in herds or lots of calves to the number of 745. In swine, 97 cases passed through the clinic and of this number, 26 were representative of diseases in swine herds and litters of young to the number of 1,247. In sheep there were 29 cases in the clinic and of this number, 14 were representative of flocks and lambs to the number of 1,375. Horse cases to the number of 21 were also handled by this department and in addition, 161 tests for pregnancy were conducted.

The extension service consisted of 15 investigational visits to examine herds in which outbreaks of diseases and breeding difficulties had occurred. A number of trips in a consultation capacity with practicing veterinarians were also made. Cobalt was mailed to 35 farm addresses for cattle suffering with apparent deficiency of that element. Protamone was forwarded to veterinarians to be used on barren and slow working bulls. Ascorbic acid solutions were mailed to a number of veterinarians for use on shy breeding cows. A great many letters of inquiry are answered from this department regarding disease conditions affecting livestock. At the request of a few of the Agricultural Representatives, ten addresses were given at Junior Farmer Meetings. At livestock meetings held by the breed organizations, six addresses were given.

DEPARTMENT OF PARASITOLOGY AND FUR BEARING ANIMALS

A. A. Kingscote, V.S., D.V.Sc.

The Department of Parasitology and Fur Bearing Animals has undergone considerable reorganization during the fiscal year.

Prior to January 1945, the entire responsibility of lecturing and routine work, associated with Fur Bearing Animal Diseases, Protozoology, Entomology and Helminthology fell to Dr. A. H. Kennedy, who, in addition to lecturing in these four courses, conducted autopsies, prepared vaccines, and held an appointment as Dean of Residence. This multiplicity of responsibilities was the result of a wartime necessity. At the conclusion of the 1945 Spring term, Dr. Kennedy was taken seriously ill. Essential duties, consisting of post mortem examination and laboratory tests, were conducted by Dr. F. W. Schofield and Dr. A. F. Bain, otherwise the department virtually ceased to exist during the summer of 1945 and until Dr. Kennedy's return.

At the beginning of the New Year, 1946, Dr. A. A. Kingscote, who had been pre-war lecturer in parasitology at the college was released from overseas service and appointed head of the department.

A further increase in staff followed with the release of Dr. H. J. Griffiths from special scientific duties in the Royal Canadian Army Medical Corps.

Two non-technical staff members consisting of part-time term and full-time summer student help, were made available. In addition, much needed full-time stenographical assistance materialized toward the end of the fiscal year. As the departmental staff became available, the duties were divided among the members with the object of creating more efficient teaching methods, and more prompt and efficacious extension services.

Fur Bearing Animal requirements were majored and by the beginning of February 1946 became Dr. Kennedy's sole technical responsibility in regard to teaching and extension work. Dr. Kennedy has now a full-time student assistant and a part-time stenographer to render the ever increasing services demanded by the growing Ontario Fur Industry (1,200 farmers in the Province).

Work in parasitology, both teaching and applied, was sub-divided under its three main divisions namely protozoology, entomology and helminthology. Dr. Griffiths was allotted full responsibility for teaching and conducting all routine and research work in helminthology. Similar responsibilities were assumed for protozoology and entomology by the head of the department.

PARASITOLOGY

Courses in these subjects were given to the second, third and fourth year students. These courses consisted of lectures and demonstrations, which were collectively designed to give the students a knowledge of the diagnosis and control of protozoan, arthropod and helminth diseases of domestic animals.

Routine duties in connection with parasitology consisted of making autopsies, collection of teaching materials, and the examination of fecal and skin lesion samples. Research projects were started early in 1946 to establish the tolerance and toxicity of DDT in turkeys. The value of this new insecticide was ascertained in regard to its ability to destroy isopods, crustacean intermediate hosts of poultry parasites. The symptoms of DDT poisoning in birds were established. Work on blackhead and avian coccidiosis has been started and is still in progress. Extension projects initiated during the year, and which are now under development concern turkey parasite control generally and sheep parasite control on a county scale.

GENERAL

Outlines of all lecture courses on fur bearing animals, protozoology, entomology and helminthology have been revised.

A considerable amount of scientific equipment has been added to the department and has improved greatly the facilities for teaching, research and routine work.

The outline for teaching, research and extension work has been completed in detail for the ensuing year. Projects have been initiated to complete the revision of all lecture notes and the building up of museum specimens, lantern slides, and microscopic and demonstration specimens to meet the greatly increased student enrollment for the coming year.

FUR BEARING ANIMALS

Arnold H. Kennedy, B.S.A., V.S., D.V.M., D.V.Sc.

In the past fiscal year the work has steadily increased and has been conducted under the following headings:

1. Diagnostic Work

During the above mentioned period 116 post-mortems were made upon fur-bearing animals. Tissues were prepared for microscopic examination, diagnostic purposes and study. Treatments were advised in all cases where disease necessitated control measures. The following table indicates the number of the various species of animals examined for disease and the diseases affecting them. In the majority of these cases, where only one animal was examined for diagnosis, the condition represented a number of animals being similarly affected on the ranch.

TABLE I

REPORT OF POST MORTEM EXAMINATIONS MADE ON FUR BEARING ANIMALS

from October 1, 1945 to March 31, 1946

Diseases	Foxes	Mink	Rabbits Angoras	 Other Breeds	Chinchillas	Guinea Pigs	Muskrat	Beaver	Skunk	Miscellaneous Fur Bearing Animals	Total
Pneumonia	2	23		1							26
Food Poisoning		19		1							20
Distemper		12									12
Streptococcic Infection	1										1
Boils		5									5
Bacterial Infections		2									2
Tuberculosis		3									3
Nephritis	8	2									10
Jaundice	1										1
Tail Chewing		3									3
Nutritional Anemia		10									10
Throat Infection	2										2
Eye Infection		2									2
Cystic Calculi		1									1
Parasites	1										1
Convulsions	1										1
Abscess				1							1
Indigestion					1						1
Ear Canker				1							1
Diarrhoea				1							1
Undiagnosed		2									2
Putrid		9									9
Identification										1	1
Totals	16	93		5	1					1	116

2. Extension Work

Service under this heading consisted of visiting ranches and discussing fur farming problems and their troubles with the owners; attending regional meetings, addressing fur farmers' meetings, the examination of animals for freedom from disease at the live animal fur shows and the answering of correspondence relative to fur farming.

3. Investigational Work

As time permitted, and materials became available, various diseases affecting fur-bearing animals were studied. Case histories were recorded in detail. Bacteriological and pathological examinations were made when necessary. Photographs and drawings have been made, filed and recorded on diseases.

4. Biological Products

7,382 doses of formal tissue vaccine for mink were prepared. 1,000 doses were imported from the Fromm Laboratories, Grafton, Wis., U.S.A. A total of 8,382 doses have been available for distribution to ranches in Ontario. 5,512 doses of formal tissue vaccine for mink were distributed to veterinarians throughout Ontario for immunizing and treating mink for distemper. 200

treatments of distemperoid vaccine were procured and kept on hand for immunizing foxes against distemper. To date, 200 treatments have been distributed to veterinarians for immunizing foxes against fox distemper. 2,200 cc. of autogenous bacterin were prepared and distributed to veterinarians for immunizing and treating foxes against bacterial infections that have occurred on fox ranches in Ontario.

5. Tutorial Work

A course on fur bearing animal husbandry and diseases was given to the senior class at the college. A scholarship has been made available for a student chosen from the graduating class to pursue studies on fur bearing animals.

6. The following table gives a summary of the number of species of animals and the diseases with which they were affected.

TABLE II

A DETAILED REPORT OF THE PROBLEMS ENCOUNTERED IN FUR BEARING ANIMALS TO WHICH ATTENTION HAS BEEN GIVEN

from October 1, 1945 to March 31, 1946

Diseases	Foxes	Mink	Rabbits		Chinchilla	Guinea Pigs	Muskrats	Beaver	Skunks	Miscellaneous	At O.V.C.	Total
			Angora	Other Breeds								
Control of Distemper	3	20										23
Raising or Ranching	6	68	43	37	17	10	5	1	2	15		204
Boils		6										6
Pneumonia	1	15	2	2								20
Parasites		1										1
Food Poisoning	1	23										24
Feeding		4				1				2		7
Feeding Meat	1	10										11
Tuberculosis	1	2										3
Chronic Nephritis	1	1										2
Deficiency Diseases		2										2
Inoculating	1	11										12
Bacterial Infections		1										1
Tail Chewing		3										3
Mites Affecting		1										1
Trapping		1								4		5
Short Course on	1	2								3		6
Jaundice	1											1
Hormones		1										1
Depraved Appetite		2										2
Purchasing of		1	1	2								4
Digestive Disturbances					1							1
Anatomical Structure of		1								1		2
Tanning Skins										4		4
Animal Musk							4					4
Tissue Vaccine		2										2
Autopsies		4										4
Vit. E Preparation		1										1
Anaemia	1	1										2
Pictures of	7	16										23
Kidney Conditions	2	2										4
Breeding Troubles		1										1
Skin Conditions		3										3
Snuffles				1								1
Shipping of Mink		1										1
Tularemia				1								1
Identification of										1		1
Diarrhoea	2											2
Ear Canker			1									1
Mating of		2										2
Bulletins										3		3
Artificial Insemination		1										1
Mouldy Meat		1										1
Cystic Calculi		2										2
Nursing Sickness		1										1
Medicinal Preparations	1	1										2
Enquiries Answered on											2	2
TOTALS	30	215	47	43	18	11	9	1	2	33	2	411

DEPARTMENT OF PATHOLOGY

F. W. Schofield, D.V.Sc.

TEACHING

The chief function of this department is the teaching of Pathology. This involves the preparation of tissue for study of both gross and microscopic pathology. During the year over thirty class sets of sections were prepared and sixty mounted specimens were added to the museum.

INVESTIGATION

The services of this department are always at the disposal of the veterinary practitioner and the livestock industry for the investigation of unusual diseases occurring among the domestic animals.

During the current year investigation was made into a number of outbreaks of disease, the most interesting of which were:

Salmonellosis in Cattle (*Sal. typhimurium*)
Parasitism in Sheep
Congenital Deformity of the Mandibles in Chinchillas
Malignant Catarrh of Cattle
Granular Vaginitis of Cattle
Infectious Keratitis of Cattle
Toxaemia of Calves

PATHOLOGICAL LABORATORY SERVICE

This involves the routine examination of tissues received from veterinary practitioners and the post mortem examination of carcasses and portions of both large and small animals. There were 448 specimens received this year. These required the preparation of over 2,000 tissue sections. The variety of such specimens is shown in the following table:

Disease	Chinchilla	Cattle	Sheep	Horses	Swine	Dogs	Cats	Rabbits	Birds	Fox	Mink	Total
Neoplasms (Benign)												
Adenoma						15	1					16
Adeno-Fibroma						2						2
Embryoma						2						2
Fibroma		8		1		9						18
Granuloma		1		1		1						3
Lipoma						3						3
Melanoma						10	4					14
Odontoma				1								1
Papilloma		5			2	5						12
Teratoma						5						5
Neoplasms (Malignant)												
Hemangioma—Capillary						1						1
Hemangioma—Cavernous						1						1
Carcinoma		5	1	2		26						35
" adeno				1		16	1					18
" epidermoid						12						12
" tricho						2						2
Seminoma						2						2
Sarcoma												
Lymphocytoma		4				5						9
Sarcoma—chondro						4						4
" fibro					1	4	1		1			7
" lympho		4					1					5
" lipo						2						2
" myxo						2						2
" reticulum cell						3						3
Respiratory System												
Congestion Acute				2		4						6
Congestion Passive			2			3						5
Oedema	1	2				2	2					7
Pneumonia												
" bronchial		6			1							7
" chronic						1						1
" embolic			1									1
" grey hepatization		1				2						3
" lobar		2										2
Pleurisy				2								2
Infarction					2							2
Nervous System												
Encephalitis					1	2						3
Encephalo-myelitis						3						3
Paraplegia		2										2
Genito-Urinary System												
Nephritis—acute		1			1	3						5
" chronic					1	1						2
" embolic		4			1						1	6
" pyelo		3				1						4
" sub-acute glomerular		4		1		2						7
Nephrosis											1	1
Orchitis		1	1									2
Pulpy Kidney		2				2						4
Vaginitis			3									3

Disease	Chinchilla	Cattle	Sheep	Horses	Swine	Dogs	Cats	Rabbits	Birds	Fox	Mink	Total
Blood and Blood Forming Organs												
Anaemia						1						1
Lucosis									5			5
Leukemia—lymphatic						1						1
Leukemia—Spleno-Medullary		1										1
Heart and Circulatory System												
Brown atrophy		1										1
Degeneration		10				1						11
Myocarditis acute		2										2
Skin and Sub-cutaneous Tissue												
Inflammatory—acute						2						2
Inflammatory—chronic						1						1
Liver												
Abscess		2										2
Cirrhosis		2			2	4						8
Cholecystitis		1										1
Congestion—Passive		1				2						3
Degeneration—Fatty		1	1			1						3
Focal necrosis		1		3					1	1		6
Hepatitis—chronic		1								1		2
Infiltration—Fatty					1					1		2
Gastro Intestinal Tract												
Enteritis—acute		2			1	1						4
Enteritis—necrotic					1							1
Gastritis—chronic		1				2						3
Special Diseases												
Actinobacillosis		7										7
Actinomycosis		2				1						3
Coryne bacterium Infection		6										6
Deficiency—iron					1							1
Deficiency—phosphorous		2										2
Entéro-hepatitis									2	2		4
Johne's Disease		1										1
Malignant Catarrh		1										1
Parasites			2									2
Poisoning—strychnine							1					1
Rhinitis					15							15
Salmonellosis		4										4
Septicemia		7			2							9
Streptococcus Infection					1							1
Swamp Fever				4								4
Tuberculosis		20							3			23
Miscellaneous		9	1	14	2	2		10	4	2	1	45
Totals	1	141	12	32	36	179	11	10	16	7	3	448

DEPARTMENT OF PHYSIOLOGY

H. T. BATT, D.V.SC., PHD.

The work of this department is concerned with teaching the physiology of domestic animals, and teaching the clinical chemistry of domestic animals to undergraduate students in the Ontario Veterinary College. Some investigational work is also done, but this, at present is subsidiary to the instructional work.

Due to the great influx of students, the teaching and investigational work of this department are, at present, hampered by lack of equipment, facilities, and specially trained assistants, for example—the laboratory accommodation only permitted a portion of the class to attend at one time. The laboratory work with the first year was repeated eight times, and with the second year, twice. However, conditions in these regards are improving, and it is confidently expected that, upon completion of the, at present planned, construction at the College, these deficiencies may be remedied.

The total teaching load of this department consisted of the delivery of 203 one-hour lectures, the preparation and supervision of 60 three-hour laboratory periods, the setting and holding of 11 examinations, and the marking of 928 examination papers. This load was distributed as follows:

PHYSIOLOGY

The first year class, totalling 148 students, received 87 one-hour lectures, and spent 4 three-hour periods in the laboratory, 12,896 student-lecture hours and 1,776 student-laboratory hours—a total of 13,672 student-teaching hours. Four examinations were held during the course of instruction.

The second year class of 48 students received 87 one-hour lectures and pent 3 one-hour periods in the laboratory, a total of 4,176 student-lecture hours and 1,008 student-laboratory hours. Four examinations were held during the course of instruction.

The teaching schedule for physiology thus included the delivery of 174 one-hour lectures, the preparation of and supervision of 46 three-hour laboratory periods, the holding of 8 examinations and the marking of 784 examination papers.

CLINICAL CHEMISTRY

The second year class, 48 students, received 29 one-hour lectures and spent 7 three-hour periods in the laboratory. 1,392 student-lecture hours and 1,008 student-laboratory hours, a total of 2,400 student-teaching hours. Three examinations were held during the course of instruction, 144 examination papers written.

The teaching schedule in clinical chemistry thus included the delivery of 29 one-hour lectures, the preparation and supervision of 14 three-hour laboratory periods, the holding of 3 examinations and the marking of 144 examination papers.

ANNUAL REPORT

OF THE

Department of Highways

ONTARIO

FOR THE FISCAL YEAR ENDING MARCH 31st

1946

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO

SESSIONAL PAPER No. 32, 1947

ONTARIO

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1947

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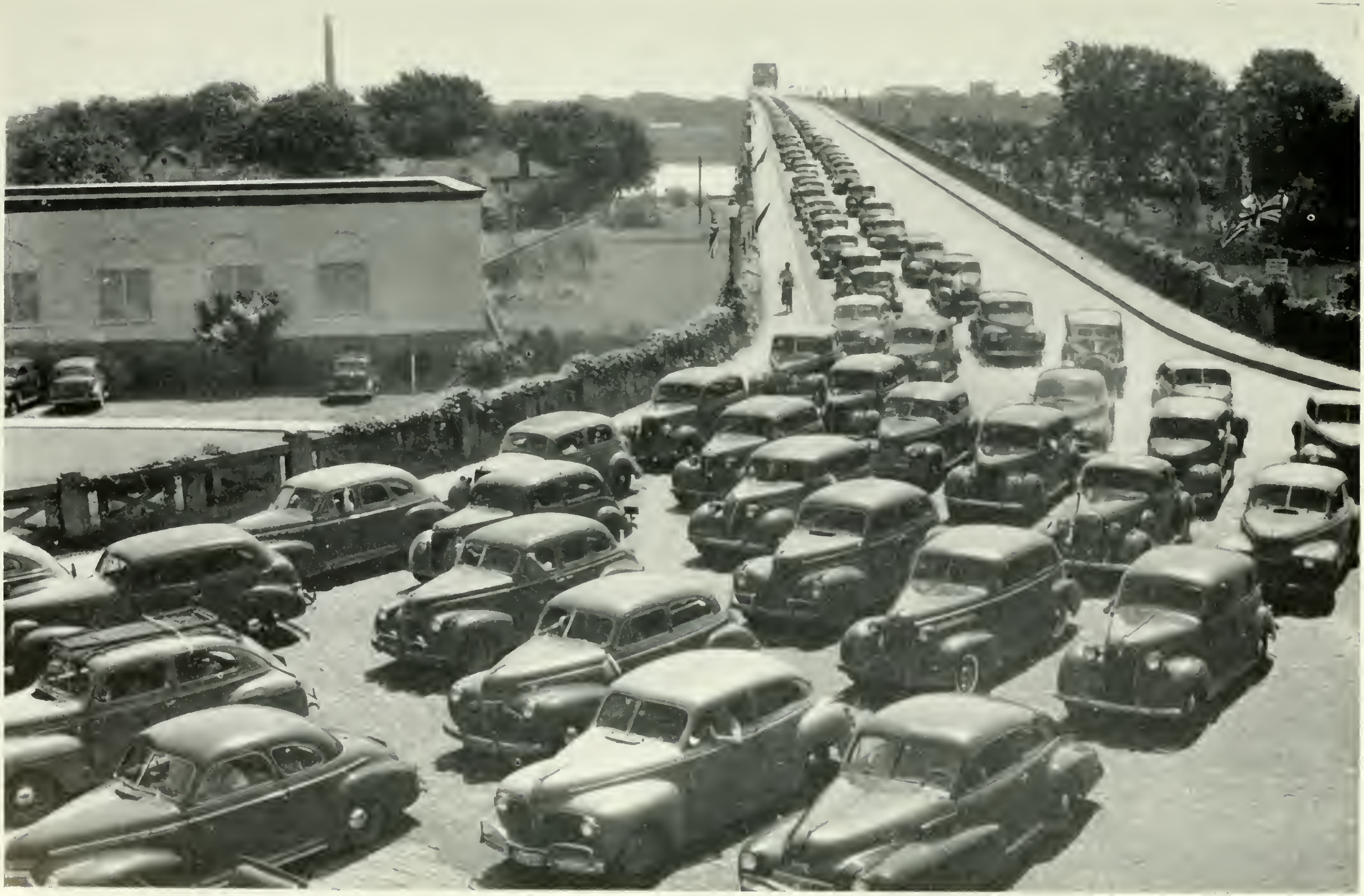


AMERICAN CARS ENTERING ONTARIO VIA PEACE BRIDGE AT FORT ERIE ON LABOUR DAY.

To The Honourable Albert Matthews, LL.D.,
Lieutenant-Governor of the Province of Ontario.

May it Please Your Honour:—

The undersigned has the honour to transmit the Annual Report of the Department of Highways, Ontario, for the fiscal year ending March 31st, 1946.

Respectfully submitted,

Geo. H. Doucett,
Minister.

Department of Highways, Ontario,
Toronto, March 30th, 1946.

To The Honourable Geo. H. Doucett,
Minister of Highways, Ontario.

Sir:—

I have the honour to present herewith Report on the activities of the Department of Highways for the Fiscal Year ended 31st March, 1946.

The Report covers operations and functions performed by the various branches, including King's Highways, Municipal Roads, Bridge Construction, Accounting, Gasoline Tax and Motor Vehicles.

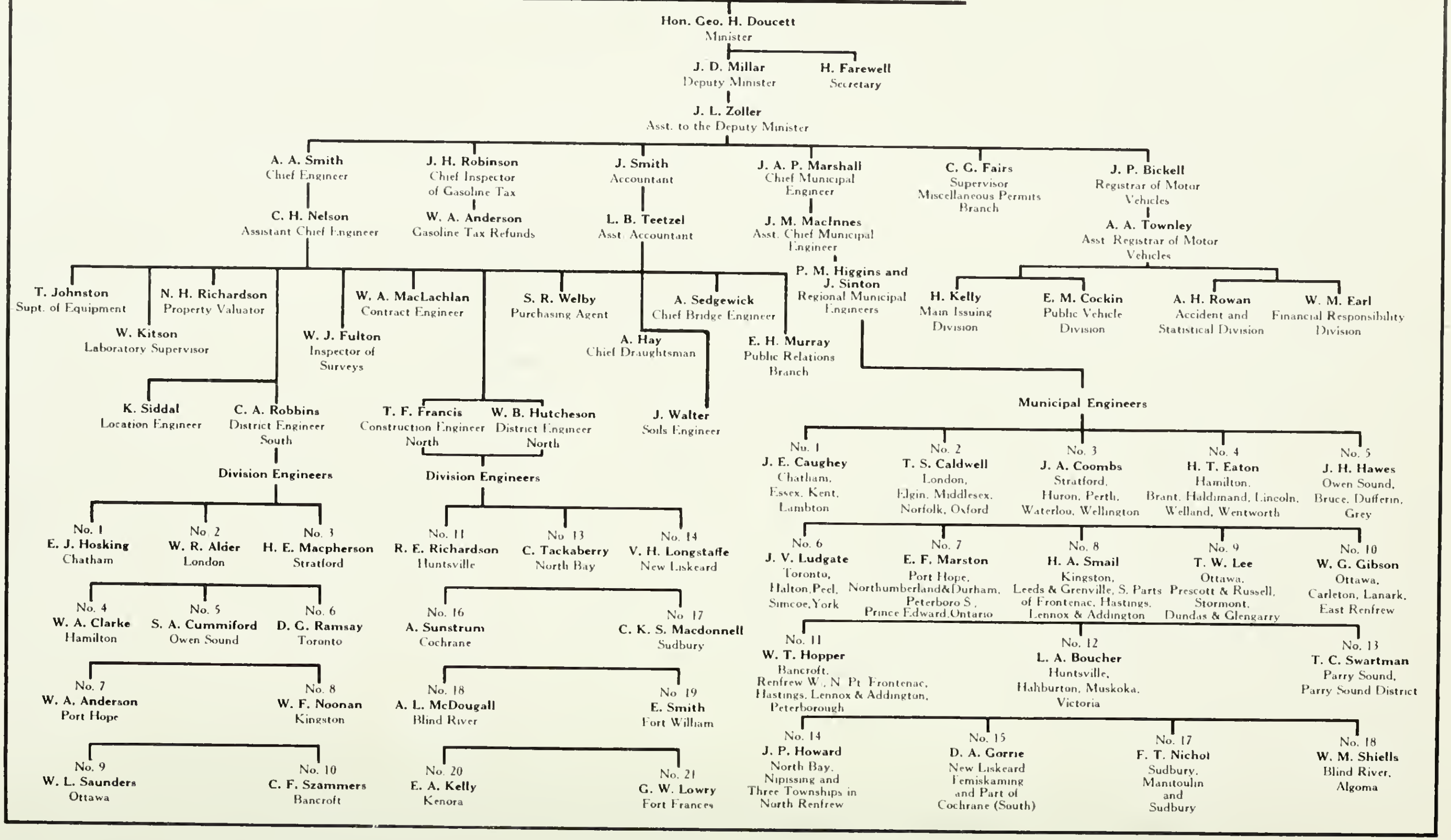
I have the honour to be, Sir,

Your obedient Servant,

J. D. Millar,
Deputy Minister.

Department of Highways, Ontario.
Toronto, March 30th, 1946.

1945
ORGANIZATION CHART
DEPARTMENT OF HIGHWAYS ONTARIO


Hon. Geo. H. Doucett
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Deputy Minister
H. Farewell
Secretary
J. L. Zoller
Asst. to the Deputy Minister
A. A. Smith
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Assistant Chief Engineer
J. H. Robinson
Chief Inspector of Gasoline Tax
W. A. Anderson
Gasoline Tax Refunds
J. Smith
Accountant
L. B. Teetzel
Asst. Accountant
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J. M. MacInnes
Asst. Chief Municipal Engineer
C. G. Fairs
Supervisor Miscellaneous Permits Branch
J. P. Bickell
Registrar of Motor Vehicles
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Laboratory Supervisor
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Inspector of Surveys
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Contract Engineer
S. R. Welby
Purchasing Agent
A. Sedgewick
Chief Bridge Engineer
A. Hay
Chief Draughtsman
E. H. Murray
Public Relations Branch
P. M. Higgins and J. Sinton
Regional Municipal Engineers
H. Kelly
Main Issuing Division
E. M. Cockin
Public Vehicle Division
A. H. Rowan
Accident and Statistical Division
W. M. Earl
Financial Responsibility Division
K. Siddal
Location Engineer
C. A. Robbins
District Engineer South
T. F. Francis
Construction Engineer North
W. B. Hutcheson
District Engineer North
J. Walter
Soils Engineer
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No. 3 H. E. Macpherson Stratford
No. 4 W. A. Clarke Hamilton
No. 5 S. A. Cummiford Owen Sound
No. 6 D. G. Ramsay Toronto
No. 7 W. A. Anderson Port Hope
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Division Engineers
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No 13 C. Tackaberry North Bay
No. 14 V. H. Longstaffe New Liskeard
No. 16 A. Sunstrum Cochrane
No 17 C. K. S. Macdonnell Sudbury
No. 18 A. L. McDougall Blind River
No 19 E. Smith Fort William
No. 20 E. A. Kelly Kenora
No. 21 G. W. Lowry Fort Frances
Municipal Engineers
No. 1 J. E. Caughey Chatham, Essex, Kent, Lambton
No. 2 T. S. Caldwell London, Elgin, Middlesex, Norfolk, Oxford
No. 3 J. A. Coombs Stratford, Huron, Perth, Waterloo, Wellington
No. 4 H. T. Eaton Hamilton, Brant, Haldimand, Lincoln, Welland, Wentworth
No. 5 J. H. Hawes Owen Sound, Bruce, Dufferin, Grey
No. 6 J. V. Ludgate Toronto, Halton, Peel, Simcoe, York
No. 7 E. F. Marston Port Hope, Northumberland&Durham, Peterboro S., Prince Edward, Ontario
No. 8 H. A. Smail Kingston, Leeds & Grenville, S. Parts of Frontenac, Hastings, Lennox & Addington
No. 9 T. W. Lee Ottawa, Prescott & Russell, Stormont, Dundas & Glengarry
No. 10 W. G. Gibson Ottawa, Carleton, Lanark, East Renfrew
No. 11 W. T. Hopper Bancroft, Renfrew W., N. Pt. Frontenac, Hastings, Lennox & Addington, Peterborough
No. 12 L. A. Boucher Huntsville, Haliburton, Muskoka, Victoria
No. 13 T. C. Swartman Parry Sound, Parry Sound District
No. 14 J. P. Howard North Bay, Nipissing and Three Townships in North Renfrew
No. 15 D. A. Gorrie New Liskeard Temiskaming and Part of Cochrane (South)
No. 17 F. T. Nichol Sudbury, Manitoulin and Sudbury
No. 18 W. M. Shiells Blind River, Algoma

HIGHWAY No. 7 NEAR SILVER LAKE.

HIGHWAYS OF ONTARIO

By J. D. Millar, Deputy Minister

In the period covered by this Report for the fiscal year ending March 31, 1946, some of the outstanding events of history were taking place. The collapse of the German armies in May, 1945, was followed by the announcement of the atomic bomb in August and the subsequent surrender of Japan in September. With the victorious ending of World War II, the Department began the task of setting in motion the work of post-war rehabilitation of the highway system. As the summer construction season was nearly at an end, only a limited amount of new work could be started. During the winter of 1945–46 the most essential projects were chosen and plans completed for the coming year. Staff members, returned from the armed forces, brought a wealth of technical knowledge of new construction methods developed during the war.

As will be noted in the report of the Chief Engineer, the bulk of the 1945 work on the King's Highways was directed to maintaining road surfaces and little new grading or bridge construction could be undertaken.

Reviewing Department reports of the fifteen years which have elapsed since 1930, several outstanding features are evident: the increased attention given to subgrade conditions and the base materials under pavements predominate. There are two reasons for this; first is the increase in the number and weight of commercial vehicles and, second, is the greatly extended snow ploughing done throughout the Province. Where a coating of snow formerly protected highways from deep penetration of frost, this snow has been removed in recent years and many cases are reported of seven to eight feet of frozen soil under pavements. It frequently requires three months warm weather to bring out this frost and in the interval the subgrade is wet and unstable. Careful attention is paid to locating soils subject to frost action and correcting heaving and failure in the spring months.

The maintenance of the King's Highways was still hampered by lack of machinery and manpower. An increasing number of motorists, returning to the road after gasoline rationing was lifted, were meeting for the first time the results of wartime deterioration of road surfaces. Their understanding of the Department's problem and their patience in accepting temporarily a much lower standard is greatly appreciated. Attention is called to the number of traffic control installations now in operation in various parts of the Province. In preparation of engineering studies, increasing use is being made of automatic traffic counters. The planting of permanent snow hedges was extended and results of these experiments are proving very satisfactory.

The revenue of the Department increased slightly over the previous year due chiefly to the lifting of gasoline rationing. Expenditure was also higher with increased subsidies being paid to the Counties and Townships. As these latter cover the calendar year from January 1, 1945, to December 31, 1945, the increased costs of heavy snow removal in the winter of 1944–45 are included. The following comparative figures indicate the excess of revenue over expenditure in the period since the outbreak of war:

YEAR	APPROXIMATE REVENUE	APPROXIMATE EXPENDITURE
1939–40	$ 34,000,000	$ 32,000,000
1940–41	36,000,000	26,300,000
1941–42	38,000,000	35,500,000
1942–43	32,500,000	19,800,000
1943–44	36,800,000	19,200,000
1944–45	36,500,000	18,600,000
1945–46	37,300,000	22,900,000
SEVEN-YEAR TOTALS	$ 251,100,000	$ 174,300,000

With the removal of the rationing of gasoline, the permit system for sale of gasoline exempt from gasoline tax was no longer possible unless the Province was prepared to take over the marking or colouring of tax-free gasoline. It was decided, therefore, to abolish the permit system and restore the former payment of gasoline tax refunds. The elimination of an affidavit form from the application for such refunds greatly simplified payments and in the six months this change has been in operation it appears to be working very satisfactorily.

The report of the Chief Municipal Engineer indicates the necessity of all main rural roads being graded to a standard that will permit efficient snow ploughing operations. The financial contribution made by the Department toward County, County-Suburban and Township roads totalled approximately $7,080,000 as compared with $5,950,000 in the previous year, $4,900,000 in 1943 and $3,590,000 in 1942. There is every indication that municipal road subsidies which have been doubled in the last three years will again be doubled in the next three years of post-war rebuilding of the feeder roads of the Province. Illustrating the wide range of conditions which the Municipal Roads Branch encounters, attention is drawn to the new summary of work on the statute labour and unorganized township roads. It is interesting to note that the Department, while dealing with many roads of high standard equal to any in the world, is also meeting, in the remote areas of the Province, the same problems encountered by the first pioneers nearly two hundred years ago. A statement of the existing number of various units of municipal government (969) receiving financial aid for road-building is given in this report. It is interesting to compare these figures with a similar statement (221) for the year 1920.

In the report of the Motor Vehicles Branch it is noted that while total registration of vehicles declined slightly (1.8%), the revenue was increased (3.5%), chiefly due to increased truck registrations. There is an increasing tendency to license heavy low-bed trailers or "floats" to the full limit of their legal load which is creating a serious problem in the maintenance of road surfaces. Vehicles of this type, a rarity before the war, are becoming standard equipment with many construction firms and large transport organizations. Applications to the Chief Engineer's Office for special permits for gross loads in excess of fifty tons are becoming common and it is estimated that less than five per cent of the roads and bridges in the Province are capable of carrying these loads. A brief review of existing legislation governing motor vehicle operation is given.

Sections of this report dealing with the Accident Recording Division are the most unpleasant for the Department to compile. In cold printed figures they show that since 1930 a total of 8,881 persons have lost their lives in motor accidents and 154,095 have been injured. The number of accidents in 1945 was 13,458 as compared with 11,004 in 1944. The number of deaths increased from 498 to 598 in the same period. If this same ratio continues into 1946, more than 700 persons will lose their lives. The combined efforts of every safety organization in the Province are needed to reduce this tragic record.

To the members of the staff returning from the armed forces the Department extends grateful thanks for a job well done. To the loved ones of those who did not return may the writer be permitted to tender the deepest sympathy on behalf of their fellow workers.

REPORT OF THE HIGHWAYS ACCOUNTANT

By John Smith, Accountant

To J. D. Millar, Esq.,
Deputy Minister of Highways.

The following is a summary of the Receipts and Disbursements of the Department of Highways for the fiscal year, April 1st, 1945, to March 31st, 1946:

Receipts

Gasoline Tax Branch	$ 27,308,195.61
Motor Vehicles Branch	9,744,584.92
Permits: Garages, Signs, etc.	104,438.50
Miscellaneous	75,942.88
	$ 37,263,161.91

Disbursements

King's Highways and Development Roads, etc.	$ 13,870,960.41
Roads in Unincorporated Townships	262,452.33
	$ 14,133,412.74
Subsidies in Aid of County Roads	2,898,135.97
Subsidies in Aid of Township Roads and Indian Reserves	4,180,996.36
Administration, etc.	1,711,854.17
	$ 22,924,399.24

REPORT OF GASOLINE TAX REVENUE

By J. H. Robinson, Chief Inspector Gasoline Tax

To J. D. Millar, Esq.,
Deputy Minister of Highways.

The following data for the fiscal year 1945–46 relative to the Gasoline Tax Branch is respectfully submitted:

Gross Revenue

Receipts from Collectors	$ 26,689,881.94	
Receipts from Importers	39,837.56	
Receipts from Fuel Oil Consumers	88,873.26	
Receipts — Miscellaneous	15,938.69	
Tax Recovered from Bad Debts	2,149.59	
		$ 26,836,681.04

REFUNDS

Airplanes	106	Claims	$ 246,520.62	
American	256	"	26,702.39	
Cities and Towns	301	"	16,528.17	
Cleaning	927	"	108,439.93	
Contracting	764	"	144,445.33	
Farming	32,254	"	603,840.06	
Federal Government	76	"	19,011.50	
Lumbering	654	"	136,315.45	
Manufacturing	2,262	"	973,341.62	
Miscellaneous	5	"	1,575.60	
Motor Boats	2,527	"	88,554.60	
Municipal	246	"	83,326.92	
Railways	90	"	52,478.39	
Stationary Engines	5,762	"	168,149.76	$ 2,669,230.34
	46,230	"		
NET REVENUE				$ 24,167,450.70

HANDLING LICENSES

Agents	$ 50.00	
Importers	46.00	
Mixers	158.03	
Refiners	8.00	
Transporters	1,541.45	
Wholesalers	3,207.45	$ 5,010.93
		$ 24,172,461.63
FINES		9.00

DOMINION SUBSIDY

Covering Final Payment for 1944–45 and Total Payment for 1945–46	3,135,724.98
TOTAL NET REVENUE	$ 27,308,195.61

Gasoline rationing ended August 15, 1945, resulting in an increase in net revenue of 27.8% over the previous fiscal year; and a decrease of only 9.2% below the year 1940–41, on which Dominion subsidy was based. $7,694,885.09 was received from the Dominion Government to cover decrease in revenue during 1944–45 as compared with 1940–41. This was reduced to $2,440,839.89 to cover decrease for 1945–46.

The system, instituted in July, 1943, whereby farmers, fishermen, licensed guides and tourist outfitters were permitted to purchase gasoline, less the Provincial Gasoline Tax, was cancelled October 1, 1945. Refunds, plus tax exemptions, for the fiscal year 1945–46 increased 2.2% over the previous fiscal year and 57.7% over the year 1940–41; 46,230 refund claims were paid, representing a value of $2,669,230.34. Tax exemptions represented a value of $1,687,485.29. Refund claims plus tax exemptions represents a value of $4,356,715.63 in gasoline tax. The auditing of refund claims before payment resulted in $55,892.08 being disallowed, or 2% of the value of the claims paid.

The following is a stock summary of the gasoline (including solvents) as reported in the Province of Ontario:

	Gallons	Gallons
Inventory, March 1, 1945	104,741,340.5	
Quantity Manufactured	373,095,534.	
Quantity Imported	61,016,187.6	
Purchased by Vendors	599,404,938.4	
Other Items	148,487.1	
Returned Goods	23,138.4	
	1,138,429,626.	
Quantity Exported		57,452,229.5
Sales to Vendors		600,742,383.4
Sales to Government of Canada		14,801,769.1
Miscellaneous Deductions		26,408.9
Miscellaneous Deductions, Bad Debts		14,242.
Miscellaneous Deductions, Marked Gasoline		21,093,565.3
Miscellaneous Deductions, Minor Losses		9,327.5
Miscellaneous Deductions, Returned Goods		23,138.4
Sales on which Tax was Paid		334,892,858.3
Stock Losses		11,594,197.9
Inventory, February 28, 1946		97,779,505.7
		1,138,429,626.

Not included in the above are 1,110,916 gallons of fuel oil consumed on which tax was collected.

REPORT OF MISCELLANEOUS PERMITS BRANCH

By C. G. Fairs, Supervisor

To J. D. Millar, Esq.,
Deputy Minister of Highways.

I have the pleasure to submit the following 1945–46 Fiscal Year Report:

Building Permits

Number of Permits Issued	1,740
Approximate Value of Buildings	$ 6,087,516.00

Public Garage Licenses

Licenses Issued — Class "A"	4,175
Business Transfers — Class "A"	100
Licenses Issued — Class "B"	3,117
Business Transfers — Class "B"	67
Total Receipts	$ 56,108.50

Gasoline Pumps — King's Highway Outlets Only

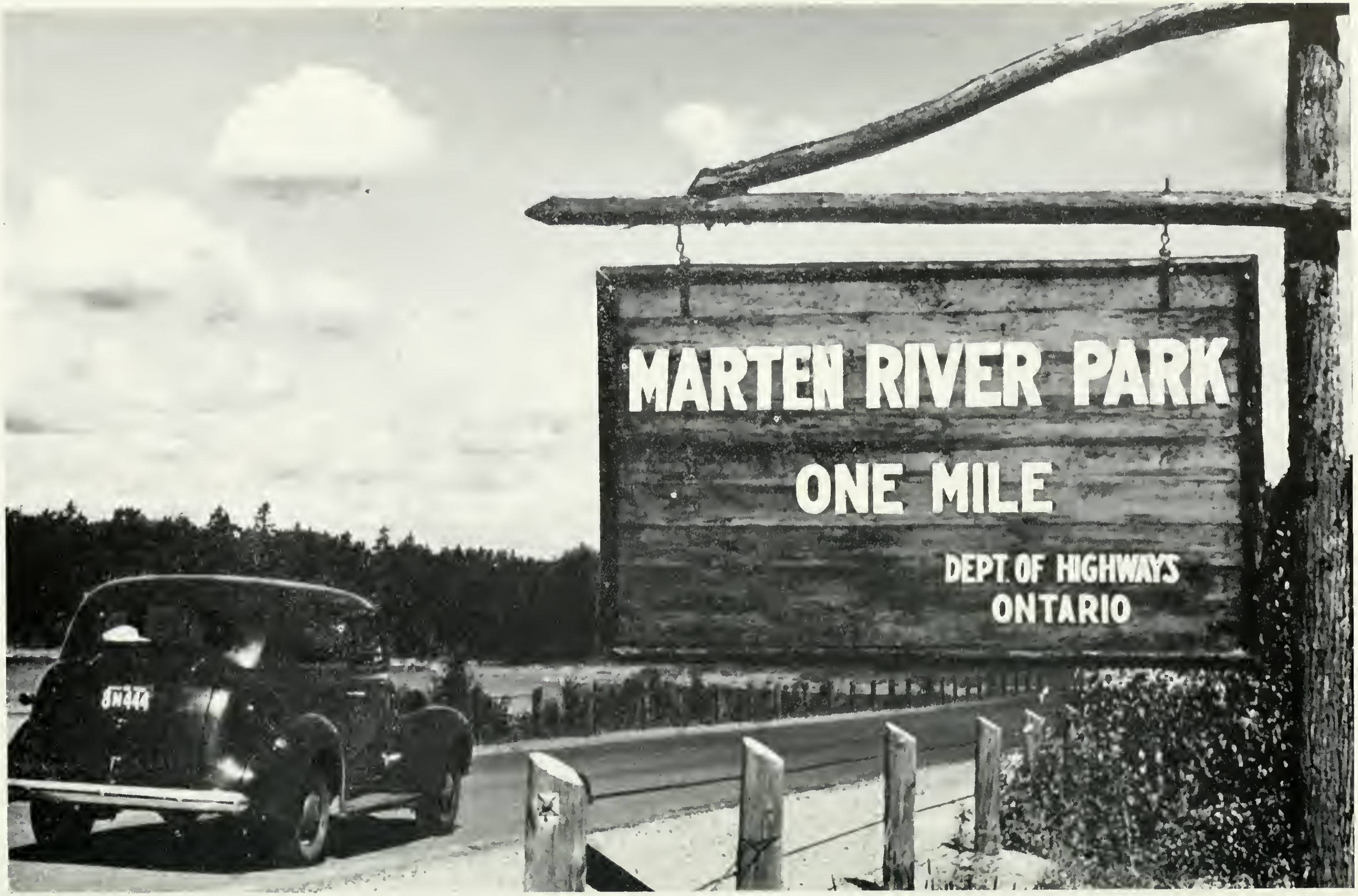
Licenses $25.00 (Curb)	506
Licenses 5.00 (8 ft. to 25 ft. from Highway Boundary)	2,225
Total Receipts	$ 35,493.00

Signs

Permits $10.00		438
Permits 5.00		1,974
Permits 1.00		559
Total Receipts	$	12,837.00

License fees received, as indicated above, will coincide with the Treasury Department Receipts for the Fiscal Year 1945–46.

Garage, Gasoline Pump and Sign Licenses are the issue as of the Calendar Year, January 1st to December 31st, 1945.


MARTEN RIVER PARK
ONE MILE
DEPT. OF HIGHWAYS
ONTARIO
8N444

SIGN INVITING MOTORISTS TO MAKE USE OF DEPARTMENT'S ROADSIDE PARKS.

HIGHWAY No. 7 AT SILVER LAKE. ROADSIDE PARK IN BACKGROUND.

ANNUAL REPORT FOR 1945

KING'S HIGHWAYS OPERATIONS

A. A. Smith, Chief Engineer

Operations on the King's Highways and secondary roads during the past year remained on a wartime basis. A continuation of the program, inaugurated the previous year, of surfacing existing gravel highways to prevent undue deterioration of these roadbeds was carried out. A total of 187.6 miles of highways were so surfaced, 100.9 miles with hot mix and 86.7 miles with road mix surfaces. Approximately 1000 additional miles of gravel surfaces were treated with prime to provide smooth-riding, dustless surfaces.

In preparation for the post-war construction program detailed soil surveys were completed on the location of the Toronto-Barrie controlled access highway between Wilson Ave. and the Holland Marsh; on the location of the Toronto By-pass between Highway No. 27 and Bathurst St.; between Beaverton and Brechin, and Coldwater and Waubaushene, on Highway No. 12; and on Highway No. 48. A reconnaissance soil survey was conducted on the location of the Toronto-Barrie highway between the Holland Marsh and Barrie and detailed borings were taken in the spring break-up areas on Highway No. 27 between Cookstown and Thornton and on Highway No. 89 between Cookstown and Alliston.

The laboratory and field data was correlated and applied directly to highway design, with special emphasis to location of grade line as affected by water table and the various types of soil. An inventory of granular materials was completed for the Toronto to Barrie and West Hill to Oshawa highways. Detailed borings were made and several deposits for granular base course were located. Approximately four weeks were spent in the field on the study of glacial geology and the various soil types as related to highway engineering. Soil tests were completed on all of the above projects at the Soils Laboratory at Maple.

The winter of 1945–46 could be considered as a normal one and although snow arrived earlier than usual this was offset by more moderate weather in the later part of the season. The addition of some new snow-fighting equipment eased the problem of winter maintenance. More extensive use of pure chemicals to relieve ice conditions was carried out and, within established temperature ranges, proved most satisfactory. Several miles of snow hedges were planted in various parts of the Province.

Maintenance operations were again hampered by shortages in labour and materials but every effort was made to maintain the highways to the usual standard.

A feature in the design of our highways that has been developed to some extent in recent years is that of signal and lighting installations to control and protect traffic movement. The Department now has a total of 41 traffic signals and 78 flashing signals in operation as well as 429 overhead lighting units in service.

Mulch surface on new Creighton Mine Road.

Laying bituminous carpet coat.

Studies were made in regard to setting up a system of collecting traffic census data. In the forthcoming year it is planned to secure traffic figures on all King's Highways and some county and secondary roads. Sixty accumulative traffic counters were purchased.

Summary of Highway Projects

Hot-mix or road-mix surfaces were laid on existing gravel highways in all but five divisions. This work included the extension of paved surfaces and the filling in of gaps in existing paved surfaces. Below is a list of the locations, and mileages, where these surfaces were laid.

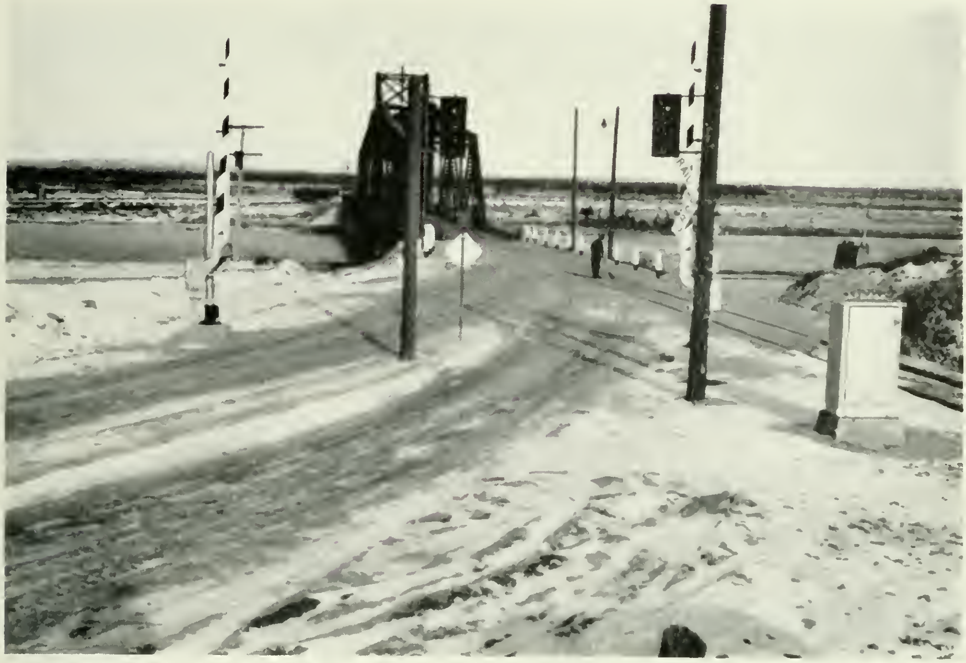
The west-bound traffic lane of The Queen Elizabeth Way was resurfaced with asphalt to a minimum thickness of five inches from a point one mile west of the Bronte Bridge to one mile east of Highway No. 25. Bituminous resurfacing was carried out on Highway No. 21 between Forest and Hank's Corners, a distance of 11.6 miles; on Highway No. 3 between Leamington and Olinda, a distance of 6.9 miles; on Highway No. 8 between Mitchell and Sebringville for eight miles and in shorter sections on other highways, principally in the western half of southern Ontario.

Grading, preparatory to the laying of pavement, was carried out on Highway No. 4 between Wingham and Teeswater, a distance of eight miles and on Highway No. 21 between Port Albert and Amberley, a further 10 miles. On Highway No. 12, between Orillia and Coldwater, a distance of 13½ miles, and on Highway No. 27 from the junction of Highway No. 5 to the new Malton Road, grading was carried out, selected granular material placed and an asphalt pavement laid. Three and one-half miles of Highway No. 29 north from the Montague Township line were graded and a start made on the paving of this piece of highway. The raising of the grade on a 10-mile section of Highway No. 66 east of Larder Lake, begun the previous year, was completed.

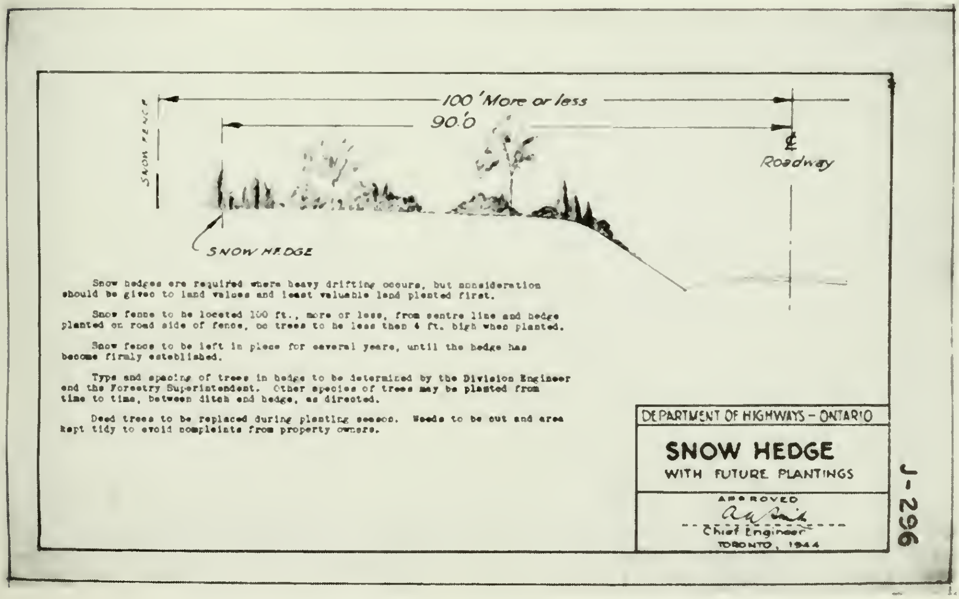
The grading of the approaches to the C. P. R. bridge across the Little Current Channel to permit motor traffic to, and from, Manitoulin Island was completed during the summer, but, due to the difficulties in securing signal equipment, the bridge was not opened to motor traffic until November 28th, on which date the ferry ceased operation. Use of the bridge permits 24-hour service across the Channel.

Hot-Mix Surfaces Laid

Highway No.	Location	Mileage
7	Parkhill-Thedford	8.5
7	Silver Lake-Sharbot Creek	10.5
11	Temagami North and South	10.0
12	Orillia-Coldwater	13.5
17	Sault Ste. Marie North	6.1
17	Kakabeka Falls East	7.8
27	Highway No. 5-Malton Road	3.5
42	Delta-Westport	12.5
56	Blackheath-Highway No. 3	8.0
79	Thedford-Port Franks	5.9
	Haliburton-Highway No. 35	14.6
		100.9



Approach to bridge at Little Current, showing traffic signals to control both train and motor vehicle traffic.


100' More or less
90.0
SNOW FENCE
℄
Roadway
SNOW HEDGE
DEPARTMENT OF HIGHWAYS – ONTARIO
SNOW HEDGE
WITH FUTURE PLANTINGS
APPROVED
Chief Engineer
TORONTO, 1944
J-296

Snow hedges are required where heavy drifting occurs, but consideration should be given to land values and least valuable land planted first.

Snow fence to be located 100 ft., more or less, from centre line and hedge planted on road side of fence, no trees to be less than 4 ft. high when planted.

Snow fence to be left in place for several years, until the hedge has become firmly established.

Type and spacing of trees in hedge to be determined by the Division Engineer and the Forestry Superintendent. Other species of trees may be planted from time to time, between ditch and hedge, as directed.

Dead trees to be replaced during planting season. Weeds to be cut and area kept tidy to avoid complaints from property owners.

Department standard for snowhedge planting.

Road-Mix Surfaces Laid

Highway No.	Location	Mileage
7	Actinolite East	1.0
11	Near Marten River	2.0
17	Sturgeon Falls-Hagar	4.3
17	Hagar-Markstay	6.2
17	Vermillion River East	8.0
17	Towns of Webbwood, Massey, Blind River, Bruce Mines, Thessalon	5.6
17	At Dorion	3.0
34	Vankleek Hill South	4.0
35	Oxtongue River-Black River	16.5
37	Actinolite-Tweed	7.0
41	Kaladar North	5.5
62	Combermere-Barry's Bay	12.5
66	Larder Lake East	3.0
67	Iroquois Falls-Porquis Junction	6.1
	Highway No. 46-Victoria Road	1.0
	Sudbury-Frood Mine	1.0
		86.7

At the end of the 1945 fiscal year ending March 31st, 1946, the total mileage of the different types of surfaces comprising the King's Highway System was as follows:

Concrete	1772.65
Bituminous Pavement	1705.09
Low Cost Bituminous Surface	925.28
Gravel and Crushed Stone	3241.26
Total	7644.28

A list of the roads added to the system, together with the mileage and date of designation, also a list of the roads and mileages reverted from the system, is shown in Appendix No. 3.

The details of the various grading and paving work and of bridges under construction follow later in this report. Details of bridges completed during the year are listed in the Chief Bridge Engineer's Report.

SURVEYS BRANCH

Land Surveys

During the year, 401 Land Plans were completed, 310 from field surveys, and 91 from office information. These Plans comprise 182 miles of right-of-way, 19 gravel pits and 1 park area, amounting to 3,350 acres and affecting 676 owners.

Owing to the difficulty in hiring sufficient office and field staff, a plan of training was introduced whereby men without experience, usually ex-service personnel, were employed and given instruction in plotting, trigonometrical calculations, fundamentals of surveying, interpretation of field notes, and tracing with Leroy mechanical lettering equipment. These new draftsmen, after completing this course, are placed in groups of four or five under the supervision of a senior draftsman, who gives detailed instructions for each job assigned.

Typical broken section of roadbed caused by spring break-up conditions.

Excavating disintegrated roadbed on Highway No. 3 between Jarvis and Simcoe.

In a similar way the field staff is being built up by apprenticing a number of the more competent field assistants as Ontario Land Surveyors. As these apprentices become technically qualified, and are familiarized with the various phases of Departmental procedure, it is intended to make them Chiefs of Parties under the direction of a District Land Surveyor.

This year the Standard Concrete Monument was changed to make it five feet long, an increase of one foot, and, when planted, the extra portion is to remain above the ground. The purpose of this change is to make it easier for Departmental Engineers to find and use these survey points, particularly during the winter and in bush areas, and to reduce the possibility of their destruction owing to lack of knowledge of their presence.

Location Surveys

Location surveys were made of 1,146 miles of roads consisting of 805 miles of surveys of existing King's Highways, together with revisions where necessary, 79 miles of Controlled Access Highways, 40 miles of secondary roads and 222 miles of new highways or revisions of existing ones. Field work was completed and plans prepared for four bridge sites, 27 proposed grade separations at existing level railway crossings, together with 15 other miscellaneous surveys.

Engineering Work

Engineering work was completed for the Controlled Access Highway from Toronto to Barrie and the Toronto By-pass. This work consisted of preparing in detail plans, profiles, etc., for the complete construction of the highways prior to contracts being called. Fourteen other office engineering jobs were completed, consisting of setting grades, quantities and designing, etc. Study plans were prepared of 3,969 square miles consisting of 3,636 square miles compiled at a scale of 1000 feet to 1 inch and 333 square miles at a scale of 400 feet to 1 inch. These plans were prepared from aerial photographs. Highway routes were selected and marked on the plans and photographs which were used by field parties in the field when running the proposed road locations.

Traffic Census

A traffic census and study was commenced in September, 1945, by the purchasing of 60 accumulative automatic traffic counters. These counters were used to secure data to prepare traffic flow plans and traffic densities in the southern part of the Province. During the coming year it is proposed to procure traffic census on all King's Highways, some County and Secondary Roads in Ontario. The installation of permanent Automatic Traffic Recording Base Stations using electric eye was delayed owing to the scarcity of equipment being manufactured.

Spring flood conditions on Highway No. 2 at Pickering.

Asphalt jacking operations.

A winter highway widened by rotary plow.

Sand loading bin located at junction of No. 11 Highway and Airport Road near North Bay.

Rotary plow in operation.

Close-up view of rotary plow in operation.

DIVISION NO. 1 — CHATHAM

Hot-mix mulch surfaces were laid on Highway No. 7 from Parkhill to the junction of Highway No. 82, a distance of 8.52 miles, and north on the latter highway to its junction with Highway No. 21, a distance of 5.88 miles. Bitiminous resurfacing was carried out on Highway No. 3 for 6.9 miles from Leamington to Olinda; on Highway No. 18 in spots aggregating one mile between Amherstburg and Windsor; on Highway No. 21 for 11.6 miles between Forest and Hank's Corners; on Highway No. 40 for 1.8 miles north of Chatham and on Highway No. 98 on four miles from Charing Cross to Blenheim.

Over 6,000 tons of rip-rap were placed along Highway No. 40 between Sombra and Corunna and approximately 1,000 tons each at Amherstburg and at Pelee dock. Approximately one mile of snow hedge was planted along Highway No. 21 in Lambton county.

DIVISION NO. 2 — LONDON

Highway No. 2 was resurfaced with hot-mix from the junction of Highway No. 80 westerly for four miles, west from Paris for 0.4 miles and between London and Thamesford for 1.9 miles. Resurfacing was also carried out on Highway No. 5 from the junction of Highway No. 24 westerly for 2.85 miles and through the village of Glencoe on Highway No. 80. Prime was applied on the 10-foot gravel strip on Highway No. 7 between Elginfield and Parkhill and on Highway No. 73 from Port Bruce to the Dorchester Road, Highway No. 74 from New Saarum to Belmont, Highway No. 80 from Glencoe to Alvinston, Highway No. 81 from Mount Brydes to the junction of Highway No. 7, and Highway No. 99 from the junction of Highway No. 24 easterly for 4.4 miles; a total mileage of prime of 14.1 miles of 10-foot strip and 59.8 miles of standard width.

The badly broken section of Highway No. 5 east and west of St. George was repaired. The old Milldale steel bridge at Norwich on Highway No. 59 was replaced with a new concrete structure with a span of 55 feet and an old concrete arch culvert, 3 miles north of Delhi, was replaced by a new concrete one. Culvert replacement was also carried out on Highway No. 2 between London and Thamesford, on Highway No. 3 between Talbotville and Iona and on Highway No. 4 between Exeter and Lucan. Some 790 rods of fence were erected.

DIVISION NO. 3 — STRATFORD

Grading, gravelling and shouldering, in preparation for the laying of pavement was carried out on Highway No. 4 from Wingham to Teeswater, a distance of eight miles and on Highway No. 21 from Port Albert to Amberley, a distance of 10 miles. Highway No. 8 was resurfaced with asphalt and shouldering carried on from Mitchell to Sebringville, eight miles. One hundred and forty-three miles of standard width and 16 miles of single strip gravel surfaced highways were primed at the following locations: Highway No. 4 from Teeswater to Highway No. 9, Highway No. 19 from Stratford to Milverton, Highway No. 21 from Amberley to Kincardine, Highway No. 83 from Russelldale to Grand Bend, Highway No. 84 from Hensall to St. Joseph, Highway No. 86 from Listowel to Bluevale and from Wingham to Amberley, Highway No. 87 from Bluevale to Harriston, Highway No. 97 from Blackhorse Corner to Hickson, and Highway No. 100 from Thamesford to Highway No. 7.

Approximately one mile of snow hedge was planted.

PROTECTION OF SHORELINE FROM EROSION UNDERTAKEN AT JORDAN PARK

Sea wall under construction to retard erosion of shoreline.

Rock groins built out from shore to build up sand beach.

Finished graded and sodded shoreline.

Division No. 4 — Hamilton

The eight-mile gravel gap on Highway No. 56 between Blackheath and Highway No. 3 and the gap at Ancaster on Highway No. 2 at the new diversion were closed with hot-mix mulch surfaces. A grading contract on Highway No. 54 between Cayuga and Middleport was only partially completed due to adverse weather.

Prime was applied to gravel surfaces on Highway No. 2 at Ancaster, on Highway No. 25 from Milton to Acton, on Highway No. 52 from Highway No. 2 to Highway No. 97, on Highway No. 54 from Onodaga to Cayuga, on Highway No. 97 from Freelton to the Waterloo County Line, on Highway No. 99 from Copetown to the Brant County Line and on Highway No. 20 at Burlington Beach.

At Jordon Park further protection of Departmental property from erosion was carried out with the construction of approximately 1800 lineal feet of breakwater along the shore and consisting of some 10,000 tons of stone blocks and rubble. One mile of snow hedge was planted on Highway No. 20 west of Smithville.

Division No. 5 — Owen Sound

Prime was applied to Highway No. 4 from Durham west for six miles and from Flesherton west for fourteen miles, Highway No. 6 from the junction of Highway No. 21 to Tobermory, Highway No. 24 from Guelph to Erin and from Highway No. 10 to Collingwood, Highway No. 9 from Orangeville east for 12 miles, Highway No. 89 from Alliston to Primrose and Highway No. 91 from Duntroon to Stayner, a grand total of 150 miles.

Otherwise only general maintenance was undertaken.

Division No. 6 — Toronto

The west-bound traffic lane of The Queen Elizabeth Way from a point one mile west of the Bronte Bridge to one mile east of Highway No. 25 was resurfaced with asphalt to a minimum thickness of five inches. Resurfacing was also carried out on Highway No. 2 between Toronto and Mimico and on the connecting links through the towns of Mimico and New Toronto and the Village of Long Branch, and on Highway No. 5 just west of Summerville for four-tenths of one mile.

On Highway No. 12, between Orillia and Coldwater, a distance of 13½ miles, the roadbed was graded, granular base placed, and a 2¼″ asphalt pavement laid thereon. Heavy ditching was done along the south side of this highway for four miles between Port McNicoll and Waubaushene.

Ditching, placing granular base course, and the laying of 2¼″ asphalt pavement was carried out on Highway No. 27 for a distance of 3½ miles from Highway No. 5 north to the new Malton Road.

All gravel surfaced highways, with the exception of the divided highway east of Highland Creek, and totalling 140 miles, were treated with prime.

Division No. 7 — Port Hope

On Highway No. 2, at the Trenton Air Station, the ditches were filled and culverts extended over a distance of 1.2 miles to give a widened shoulder.

A large rock cut was taken out 11 miles north of Bobcaygeon on the Bobcaygeon-Kinmount Road to improve and reduce the grade. One mile of mulch surface was laid from Highway No. 46 to Victoria Road. Prime was applied to gravel surfaces over a mileage of 119 miles.

DIVISION NO. 8 — KINGSTON

On Highway No. 7 a hot-mix pavement was laid from Silver Lake to Sharbot Creek, a distance of 10½ miles and one mile of mulch easterly from Actinolite. Hot-mix pavements were also laid on Highway No. 42 between Delta and Crosby and between Newboro and Westport, a total distance of 12½ miles. Seven miles of mulch were laid on Highway No. 37 from Tweed to Actinolite and mulch was also laid on the plaza at the Customs building on Hill Island as an extension to the existing pavement at the Thousand Islands Bridge approach. Prime was applied on Highway No. 7 from Silver Lake westerly for 20 miles and on Highway No. 37 from Roslin to Tweed a distance of 10 miles.

Grading was carried out on Highway No. 29 from the Montague Township Line north for 3.5 miles and the paving of this section started but not completed. The erection of a new bridge over the Moira River near Plainfield on Highway No. 37, to replace the old bridge which collapsed, was begun but not completed. On Highway No. 38 a sink-hole, one-half mile south of Sharbot Lake, was filled.

DIVISION NO. 9 — OTTAWA

A mulch surface was laid on Highway No. 34 through the Town of Vankleek Hill and for a further three miles southerly. All gravel surfaces were primed.

Widening and fencing right-of-way was continued on Highways Nos. 34, 43 and 44, and further snow hedge planted. A snow-plow shed, with sleeping accommodation for drivers, was erected at Billings Bridge.

DIVISION NO. 10 — BANCROFT

A mulch surface was laid on 5½ miles of Highway No. 41 north from Kaladar and on 12½ miles of Highway No. 62 between, and through, the Villages of Combermere and Barry's Bay. Prime was applied on Highway No. 7 between Madoc and Actinolite, on Highway No. 28 between Burleigh Falls and Bancroft and on Highway No. 62 between Madoc and Bancroft, and on the Eganville-Kelly's Corners Road.

As a result of the lack of snow during the early part of the winter, frost penetration was deep and resulted in much greater than normal spring break-up conditions.

DIVISION NO. 11 — HUNTSVILLE

A mulch surface was laid on Highway No. 35 from the Oxtongue River through Dorset to the Black River, a distance of 16.5 miles; and through several villages in Haliburton, aggregating 2.5 miles. Resurfacing was carried out on Highway No. 11 between Severn Bridge and Sundridge and on certain secondary roads. Hot-mix pavement was laid from Minden to Haliburton. Prime was applied to Highway No. 69 from Nobel to Shawanaga, a distance of 12 miles, and to the first four miles east from Parry Sound on the Parry Sound-Sundridge road.

DIVISION NO. 13 — NORTH BAY

Two miles of mulch surface were laid on Highway No. 11 near the north end of the division. Three short sections, totalling 4.25 miles, of mulch were laid on Highway No. 17 between Sturgeon Falls and Hagar. Prime was applied on Highway No. 17 between Verner and Warren, a distance of 10 miles, and completed between North Bay and Mattawa; also, followed by a surface treatment, on eight miles of Highway No. 63 between North Bay and Feronia.

A short diversion at Chalk River on Highway No. 17 was constructed and Highway No. 64 reshaped throughout. A concrete culvert was constructed on Highway No. 11 one mile south of Trout Creek. A double snowplow building of brick and concrete was built at Pembroke.

Division No. 14 — New Liskeard

Ten miles of hot mix was laid on Highway No. 11 north and south of Temagami and three miles of mulch laid on Highway No. 66 east of Larder Lake. Prime was applied to gravel sections of Highway No. 11 south of Latchford and to Highway No. 101 from Pamour easterly for 15 miles.

The raising of the grade on a ten-mile section of Highway No. 66 east of Larder Lake, begun the previous year, was completed, extensive ditching was carried out between Kirkland Lake and Larder Lake, and work started, but not completed, on a revision near Barber Lake.

On the Charlton Road the approaches to Aidie Creek Bridge were constructed and three miles of new road were opened on the Goldhawk Road.

Division No. 16 — Cochrane

A mulch surface was laid on Highway No. 67 between Iroquois Falls and Porquis Junction. Five local timber bridges were replaced on Highway No. 11 and repairs were made to the Buskegan River and Missanaibi River Bridges and to the Abitibi Ferry.

Division No. 17 — Sudbury

The grading of the approaches to the C. P. R. bridge across the Little Current Channel to permit motor traffic to and from Manitoulin Island was completed during the summer but, due to the difficulties in securing signal equipment, the bridge was not opened to motor traffic until November 28th, on which date the ferry ceased operation. Use of the bridge permits 24-hour service across the Channel.

On Highway No. 17, 6.2 miles of mulch surface were laid between Hagar and Markstay and 8.0 miles from the Vermillion River easterly. A mulch surface, one mile in length, was laid on the new grade of the Sudbury-Frood Road.

Division No. 18 — Blind River

A hot-mix pavement was laid on Highway No. 17 for 0.6 miles east of Sault Ste. Marie and a further 5.5 miles north of Sault Ste. Marie. A total of 5.6 miles of mulch surfaces were laid through the Towns of Webbwood, Massey, Blind River, Thessalon and Bruce Mines. Prime was applied from the east boundary of the division for 25 miles to the pavement west of Walford and between Iron Bridge and Thessalon, a distance of 15 miles.

To remedy sub-grade conditions, selected material was placed to a depth of two feet on a one-mile section west of Nesterville. A diversion, 1600 feet in length, to avoid the necessity of rebuilding a bridge, was constructed on the Iron Bridge-Chapleau Road.

DIVISION NO. 19 — FORT WILLIAM

The pavement west of Fort William on Highway No. 17 was extended to Kakabeka Falls with the laying of 7.8 miles of hot-mix. Three miles of mulch were laid in the vicinity of Dorion. East of Port Arthur resurfacing was carried out for a distance of two miles and resurfacing was also done on Highway No. 61 between Hamilton's Corners and Cloud River for a distance of three miles. Prime was applied to Highway No. 17 for nine miles west of Kakabeka Falls and for 17 miles on Highway No. 17-A.

The reconstruction of the Little Long Lac bridge and approaches was completed and a new concrete bridge was erected over the Little Firesteel River on Highway No. 17 west of Fort William. The bridge over the Jarvis River was replaced with a large concrete culvert. A road was built from the Leitch Gold Mine to the shore of Lake Nipigon.

DIVISION NO. 20 — KENORA

Prime was applied to 22 miles of Highway No. 17 between Dryden and Vermillion Bay. Otherwise only sundry construction and general maintenance were carried out.

DIVISION NO. 21 — FORT FRANCES

On Highway No. 71, 3.5 miles west from Sleeman were resurfaced. Prime was applied on Highway No. 70 for 18 miles south from Nestor Falls and on Highway No. 71 for eight miles east from Emo, for eight miles east from Sleeman and for 1.5 miles east from Rainy River. Prime was also applied on the River Road from Fort Frances east to Rainy Lake.

BRIDGES COMPLETED DURING THE YEAR 1945

Arthur Sedgwick, Chief Bridge Engineer

During the year 752 lineal feet of bridges was completed by the Department, chiefly in Northern Ontario.

Little Firesteel Bridge

This is a 40-foot span rigid frame concrete bridge on Highway No. 17 west of Fort William, replacing an old timber structure.

Little Long Lac Bridge

The existing creosoted timber bridge was originally built as a trestle bridge with grades rising to the centre to provide for navigation. With the building of the highway water-borne traffic ceased and the increase in vehicular traffic with lack of proper vision made the bridge dangerous. The grades were accordingly cut down and the bridge shortened and widened by substituting a rock fill at each end.

Milldale Bridge

This is a 50-foot span rigid frame concrete bridge on Highway 59, south of Norwich. The old steel bridge had previously collapsed under military traffic.

The remaining construction consists of timber and creosoted timber township bridges built in the Sudbury and Thunder Bay districts.

A complete list of all the bridges built is given in Appendix 4.

REPORT ON THE WORK OF THE MUNICIPAL ROADS BRANCH FOR THE YEAR 1945

J. A. P. Marshall, Chief Municipal Engineer

The winter of 1944–45 will long be remembered by road officials throughout the Province as a most abnormal one. The various county and township organizations are to be congratulated on their earnest endeavor to keep the roads under their jurisdiction passable in spite of the most trying conditions, and their co-operation in assisting officials on the King's Highways is to be highly commended. Greater demands are being made by the local ratepayers and the general public to have the clearing of snow extended to many additional roads in the rural areas of Ontario.

During the war years there has grown up a tremendous backlog of necessary construction on our municipal roads. Many miles of these roads should be graded sufficiently to provide for the efficient use of winter equipment. The usual program of adequate maintenance was well carried out on the various municipal roads throughout the Province. However, due to the shortage of materials and to delays in the delivery of road equipment units, this program of maintenance in many instances had to be curtailed.

Total number of municipal units throughout the entire Province, made up of the counties, organized townships, etc., are as follows:

	37	Counties
	670	Organized Townships
	15	Organized New Improvement Districts (Township Units)
	125	Townships in the Statute Labour Group
	190	Unorganized Townships
Total	1037	Counties and Individual Townships.

Total of the above units eligible for Highway Improvement Aid is 969, made up as follows:

	37	Counties.
	571	Organized Township Municipalities, made up of 670 individual townships.
	11	Improvement Districts, made up of 15 individual townships.
	2	Provincial Parks.
	135	Statute Labour Boards, comprising the whole or parts of 125 townships.
	183	Units, comprising 190 townships or parts of townships.
	30	Indian Reserves.
Total	969	

COUNTY ROADS

Since the passing of The Highway Improvement Act in 1901 and to the end of 1945 a total of $171,134,270.52 has been expended on construction and maintenance of county roads, of which the province has contributed $81,886,044.49. This includes the county expenditure during 1945 on which the provincial subsidy was paid in 1946.

At the end of 1945 the province was paying subsidies to the counties on 8,560 miles of county roads — approximately 15 per cent. of the total road mileage in the area covered by the County Road System.

Expenditure on county roads in 1945 was as follows:

	Approved Expenditure	Provincial Subsidy
Construction		
County Roads	$ 1,947,294.40	$ 1,021,315.10
Maintenance		
County Roads	$ 3,744,785.45	$ 1,876,820.87
TOTAL EXPENDITURE	$ 5,692,079.85	$ 2,898,135.97

Construction Work

The work on which the above expenditure was made included the following:

Gravel or Stone	41.99	Miles
Low-Cost Bituminous Surfaces	72.14	"
Mixed Macadam and Asphaltic Concrete	14.00	"
Cement Concrete	.....	
TOTAL	128.13	"
Bridges Over 10-Foot Span	24	"
Pipe and Tile Culverts	291	"
Other Culverts	65	"

Maintenance Work

Bituminous Surface-Treatment	517	Miles
Dust-Prevention Treatment (Oil)	121	"
Dust-Prevention Treatment (Calcium)	2115.	"
Clay-Gravel Stabilization (Calcium and Salt)	51.	"
GRAVEL AND CRUSHED STONE RESURFACING:		
(a) Pitrun Gravel Applied	96,997	Cu. Yds.
(b) Crushed Gravel Applied	479,216	" "
(c) Crushed Stone Applied	74,774	" "
SNOW REMOVAL:		
(a) Mileage of Road Kept Open with Mechanical Equipment	8,263	Miles
(b) Snow Fence Erected	942	"

Mileage Adjustments

During 1945 the following changes in the county road systems were approved:

County	Additions Miles	Deletions Miles
Brant	2.00	....
Bruce	1.25	....
Carleton	....	12.25
Huron	2.25	....
Lambton	2.00	....
Leeds and Granville	11.70	0.20
Northumberland and Durham	2.75	....
Oxford	9.40	....
Peel	0.75	....
Prescott and Russell	0.90	....
Renfrew	2.00	....
Simcoe	....	2.00
Victoria	37.20	....
York	4.75	19.36
TOTAL	76.95	33.81

A net addition of 43.14 miles.

COUNTY SUBURBAN ROADS

The mileage of suburban roads is 879 miles. The approved expenditure at the end of 1945 amounted to $32,092,224.61, of which the cities and separated towns have contributed $8,367,856.89, or five per cent. of the total expenditure made on the County Road Systems.

In 1945 the expenditure on county suburban roads was $777,155.02, of which the province contributed $394,771.81 and the cities $191,191.60.

EXPENDITURES ON COUNTY SUBURBAN ROADS — 1945

Name of County	Mileage	Approved Expenditure	Government Grant
Brant	26.4	$ 29,355.76	$ 14,677.88
Carleton	90.0	90,876.64	48,524.72
Elgin	20.0	14,933.44	7,466.72
Essex	41.0	22,099.70	11,049.85
Frontenac	38.2	24,189.21	12,094.60
Grey	32.5	21,636.86	10,818.43
Hastings	5.0	4,157.05	2,078.52
Kent	9.7	3,304.35	1,652.13
Lambton	14.5	10,609.84	5,304.92
Lanark	6.0	8,862.70	4,431.35
Leeds and Grenville:			
Smith's Falls	5.1	863.39	431.69
Brockville	7.6	7,416.82	3,708.41
Lincoln	12.3	12,680.60	6,340.30
Middlesex	54.1	44,175.67	22,087.84
Ontario	16.2	14,407.01	7,203.50
Oxford	3.9	1,354.80	677.40
Perth	7.5	6,919.21	3,459.61
Peterborough	76.4	40,586.26	20,293.13
Stormont, Dundas and Glengarry	30.0	1,317.54	658.72
Waterloo:			
Galt	14.2	6,964.70	3,482.35
Kitchener	11.0	4,844.83	2,422.41
Welland:			
Niagara Falls	9.9	5,153.73	2,576.36
Welland	7.0	3,170.15	1,585.08
Wellington	23.5	11,001.61	5,500.80
Wentworth	53.0	73,285.06	37,591.87
York	264.2	312,988.09	158,653.22
TOTALS	879.2	$ 777,155.02	$ 394,771.81

ORGANIZED TOWNSHIP ROADS

For the year 1945 the government subsidized road expenditures in 566 townships, 6 improvement districts, 2 provincial parks and 22 Indian Reserves.

Expenditure on these roads in 1945 was as follows:

	Construction	Maintenance	Total
Roads	$ 1,763,661 41	$ 3,695,641.31	$ 5,459,302.72
Bridges (ordinary rate)	15,945.08	57,120.93	73,066.01
Bridges (special rate)	329,925.76	39,188.30	369,114.06
Winter Control		1,795,051.08	1,795,051.08
Total Approved Expenditure	$ 2,109,532.25	$ 5,587,001.62	$ 7,696,533.87
Provincial Subsidy	$ 1,203,589.68	$ 2,974,019.15	$ 4,177,608.83

Construction Work

The work on which the above expenditure was made included the following:

Gravel or Stone	631.0 Miles
Low-Cost Bituminous Surfaces	15.4 "
Mixed Macadam and Asphaltic Concrete	1.5 "
TOTAL	647.9 "
Bridges Over 10-Foot Span	152
Pipe and Tile Culverts	694
Other Culverts	482

Maintenance Work

Bituminous Surface-Treatment	180 Miles
Dust-Prevention Treatment (Oil)	162 "
Dust-Prevention Treatment (Calcium)	942 "
Clay-Gravel Stabilization (Calcium and Salt)	16 "
Gravel and Crushed Stone Resurfacing:	
(a) Pitrun Gravel Applied	704,940 Cu. Yds.
(b) Crushed Gravel Applied	1,331,106 Cu. Yds.
(c) Crushed Stone Applied	397,083 " "
Snow Removal:	
(a) Mileage of Road Kept Open with Mechanical Equipment	27,953 Miles
(b) Snow Fence Erected	1,111 "
Weed Spraying	850 "

CHIEF CONSTRUCTION WORK — COUNTY ROADS AND ORGANIZED TOWNSHIPS

Kent County — During 1945, laid a 3-inch layer of hot plant-mixed asphaltic concrete over 14 miles of old bituminous pavement and 2 miles on the Essex-Kent boundary line. North of Wheatley, County Road No. 1 was covered with 6 inches of clay-gravel-calcium stabilizing material.

Lambton County — Laid 4.5 miles of road-mixed bituminous pavement.

Elgin County — Laid 3 miles of armour bituminous coat near the Village of Springfield.

Middlesex County — Laid 10 miles of plant-mix mulch pavement on the Hamilton Road, completing the pavement of this important road in the county of Middlesex.

Halton County — Practically completed by the end of the year the Glen Williams bridge, with a span of 96 feet.

Frontenac County — Built a new modern garage and repair shop at Sydenham.

Leeds and Grenville County — During the year Mr. E. R. Blackwell, who had been County Engineer since the inception of the County Road System in this county thirty-five years ago, retired, and was replaced by Mr. D. A. Maciver as County Engineer.

District No. 13, Parry Sound — Widening of the present grades to enable power graders to operate and the improvement of drainage was carried out. The use of crushed gravel is being encouraged by the various municipalities in lieu of pit-run.

District No. 14, Nipissing — The replacement of the necessary culverts, chiefly with creosoted wood stave pipe, was carried out, and maintenance consisted of systematic dragging. Mechanical equipment is making big improvement in the necessary snow removal and the haulage of gravel in this district. Labour shortage here proved a serious handicap to the efficient operation of the adequate maintenance.

District No. 15, Temiskaming — The disastrous flood at the end of May upset plans for many items of new construction which were laid out early in 1945. Some permanent structures were erected to replace damage done but the urgency and lack of men and materials necessitated emergency repairs of a temporary value in most cases.

District No. 16, Cochrane — In the four organized municipalities in this district, the work consisted largely of roadside ditching, gravelling and the necessary repairing of culverts and bridges.

District No. 17, Sudbury — Mulching of 4.5 miles of gravel surfacing and the introduction of power maintenance in the eleven townships made a great improvement in the maintenance work. Wooden bridges and culverts, built with timber treated with preservative, likewise made a decided improvement on many miles of township roads.

District No. 18, Algoma — Two bridges were rebuilt, two major bridge repair jobs carried out and 3,500 feet of snow fence installed. One mile of new road was graded and gravelled.

District No. 19, Thunder Bay — Systematic dragging of 2,400 miles and the brushing of 10 miles, in addition to the placing of 40,000 cubic yards of gravel and 12 miles of roadside ditching, was carried out in the organized townships in this district.

District No. 20, Kenora — One bridge of 212-foot span, and another of 240-foot span, each with the necessary fill, were constructed. Eight miles of roadside ditching was done and 12,000 cubic yards of pit-run gravel were applied on the various township roads.

District No. 21, Rainy River — Fifteen wood and 2 concrete culverts were installed, 425 miles of dragging and 6.2 miles of heavy grade repairs were carried out; 27,000 cubic yards of pit-run gravel were applied and 36 bridges and 150 culverts were repaired. A wet summer and autumn necessitated intensive gravel repairs.

INDIAN RESERVES

Three Reserves became eligible for subsidy in 1945: Constance Lake, Golden Lake and Fort William. Of the 23 Reserves eligible, 22 reported expenditures totalling $45,845.57 on which the subsidy paid was $23,768.28.

Indian Reserve	Expenditure
Alnwick	No Aid Taken
Cape Croker	$ 968.17
Caradoc	1,708.14
Christian Island	404.50
Constance Lake	2,500.00
Fort William	1,382.25
Gibson	1,500.00
Golden Lake	299.77
Kettle Point	1,020.56
Moravian	500.00
Mud Lake	535.45
New Credit	2,336.12
Parry Island	532.55
Rama	244.15
Rice Lake	232.50
Sarnia	449.70
Saugeen	947.00
Shawanaga	204.75
Sheguiandah	293.75
Six Nations	20,868.43
Tyendinaga	6,996.43
Walpole Island	1,305.20
West Bay	616.15
Total	$ 45,845.57

NEW GRAPHIC ILLUSTRATION

A new appendix has been added to our section this year: a page of graphs to illustrate the rise and fall in total annual approved expenditures by organized municipalities and in government subsidies during the period 1920 to 1945 inclusive. It is interesting to note that the first high point of expenditure occurs for 1921. Late 1920 and early 1921 was Canada's post-war recovery peak, and our 1921 expenditures represent also something of a milestone in the educational program for good roads which had been in progress since the beginning of the century. What is sometimes called the primary post-war depression began in 1921 and accounts largely for the drop in municipal road expenditures to the low of 1925–26. The next high point is, of course, reached during 1929, the last year of our peace-time boom period. The succeeding world financial depression had the effect of driving road expenditures to an extraordinary low level in 1933. In that year, for the first time, the municipalities' road appropriations were limited for purposes of subsidy and have been to a greater or less degree controlled by the Department ever since. The greatest reduction thus made to ease the road tax burden was in 1942. Since then, the chief limitation on municipal road expenditures has been caused by the wartime shortage of men and materials.

The graphs begin at 1920 because, although four counties were drawing subsidies on county road expenditures as early as 1903, the 37 organized counties were *not all* drawing such subsidies until 1919. Township road subsidies commenced with the work-year 1920 under this Branch, with 184 organized townships participating. In 1937 the Department of Highways absorbed the Department of Northern Development and the number of organized townships taking aid under this Branch jumped from 344 in 1937 to 559 in 1938.

Rates of subsidies paid are now higher than at any previous period. County subsidies commenced with 33⅓% on construction expenditures only. In 1920 the rate was 40% on both construction and maintenance. At present the rate is 50% on general expenditures and 75% on special bridge works. The organized townships for 1920 were given 20% on general expenditures and 40% on superintendence. The present township rates vary from 50% to 80%, with an average on the 1945 total of 54.3%.

INTERIM PAYMENTS

The policy, inaugurated in 1944, of allowing interim payments of subsidy to all organized municipalities on the basis of their road expenditures during the first eight months of the year was continued in 1945. All the counties and 503 of the other organized units made the simple application for these interim cheques. The total subsidies thus paid out was $3,418,462.76:–to the counties $1,385,184.24 and to the townships, etc., $2,033,278.52. It will be noticed that nearly half of the total road subsidies on the 1945 expenditure were given as interim payments. The percentages of interim payments to final payments was 47.8 per cent. for the counties, 48.8 per cent. for the townships and 48.3 per cent. for the two groups combined.

EXPENDITURE ON WINTER CONTROL

For the second year this report lists the total approved expenditures by counties and townships for the control of winter conditions: snow clearing, sanding, purchasing and erecting snow fence, and so on. Because of the difficulties of the winter of 1944–45, to which reference was made at the beginning of this report, more than one fifth of all municipal road expenditures in 1945 were for winter control. The total approved county and township expenditure was $13,388,613.72 and of this 20.8%, $2,785,491.83, was spent to keep municipal roads open during the winter months of this year.

STATUTE LABOUR AND UNORGANIZED TOWNSHIPS

District No. 13

Seventeen Statute Labour Boards operated. Many of the narrow trails were widened and surfaced with crushed gravel. On one particular road, four out of the eight miles were reconstructed to make accessible one of the best lakes in the province.

Two Unorganized Townships received aid on a 50-50 basis.

District No. 14

Eleven Statute Labour Boards operated but it was only in the latter half of the season that progress was made and this was especially along the lines of replacement of culverts and small bridges. Under the reorganized methods adopted it is expected that considerable road improvement will be in evidence.

District No. 15

Sixteen Statute Labour Boards operated successfully but the disastrous flood in May 1945 upset plans for new construction. Some permanent structures were erected to replace damage done but in most cases it was necessary to resort to emergency repairs.

Eleven unorganized townships received assistance on the 50-50 basis, while **eight** Townships had 100% Bridge expenditures following the heavy rains.

District No. 16

Nine Statute Labour Boards (six new organizations and three formed previously) operated with the exception of one which was set up too late to carry on successfully. Preliminary work on 15 further Boards will show these 15 transferred to Statute Labour early in the following year.

In the unorganized townships, $3,735.22 was spent on work on a 50-50 basis.

District No. 17

Twelve Statute Labour Boards operated successfully while one had difficulty in maintaining its organization. New bridges and culverts were built and major bridge repairs were effected in the area.

Nineteen unorganized townships and three Indian Reserves received assistance.

District No. 18

Ten Statute Labour Boards operated successfully and show an increase in the value of the work performed. Power maintainer operation has greatly improved the condition of the roads where this assistance has been available.

Nineteen unorganized townships received assistance and four Indian Reserves were also assisted in their voluntary work.

District No. 19

Fifteen Statute Labour Boards operated successfully but two townships previously organized are not included: Devon and Dorion. Settlement in this district is confined to the organized and Statute Labour townships. There are no expenditures reported in the unorganized townships.

District No. 20

Fourteen Statute Labour Boards operated successfully but the Statute Labour township of Redditt reported no expenditures for this year.

Two unorganized townships received assistance and one of these, Wabigoon, has since been organized for Statute Labour and a number of unorganized townships have organization under consideration.

District No. 21

Seven Statute Labour Boards operated successfully. There is only one unorganized township in the district and there is not a sufficient number of settlers to form an organization.

CONCLUSION

The organized counties and townships of this Province have a splendid group of engineers and road superintendents, under whom the organization in each municipality functions. They are to be congratulated on their good work during the past few years in keeping up the usual excellent standard of maintenance. They are meeting present-day conditions, the shortage of road materials, delay in procuring the necessary equipment and problems of labour exceptionally well In addition, the Department appreciates the sincere efforts of the various groups in the unorganized townships in northern and northwestern Ontario, especially where these have been instrumental in organizing Statute Labour Boards. Great interest has been shown in all districts and Ontario has every reason to be proud of the many road organizations throughout the Province which have ably co-operated with the Department of Highways in their important work.

APPENDICES

Nos. 1 to 10

APPENDIX No. 1

EXPENDITURES BY COUNTIES AND DISTRICTS

April 1, 1945, to March 31, 1946

County	Construction	Maintenance	Total
BRANT:—			
Highway No. 2	$ 2,068.01	$ 32,819.55	$ 34,887.56
" No. 5		57,366.72	57,366.72
" No. 24	3,678.61	18,306.40	21,985.01
" No. 24A		4,657.26	4,657.26
" No. 53	574.29	22,223.33	22,797.62
" No. 54	135.56	13,862.39	13,997.95
" No. 99		8,718.43	8,718.43
Connecting Link, Town of Paris		1,600.13	1,600.13
	$ 6,456.47	$ 159,554.21	$ 166,010.68
BRUCE:—			
Highway No. 4	$ 757.10	$ 57,540.27	$ 58,297.37
" No. 6	7,985.14	64,416.94	72,402.08
" No. 9	615.47	26,610.95	27,226.42
" No. 21	1,279.67	49,580.84	50,860.51
" No. 86	559.52	7,735.69	8,295.21
Connecting Link, Town of Walkerton		498.32	498.32
	$ 11,196.90	$ 206,383.01	$ 217,579.91
CARLETON:—			
Highway No. 15	$ 11.59	$ 14,716.67	$ 14,728.26
" No. 16	3,634.12	28,304.97	31,939.09
" No. 17	14,493.51	30,210.63	44,704.14
" No. 29		5,777.08	5,777.08
" No. 31	4,148.83	31,628.22	35,777.05
" No. 44	1,290.86	14,897.36	16,188.22
Ottawa By-pass	1,749.43		1,749.43
Connecting Link, Village of Eastview		675.00	675.00
	$ 25,328.34	$ 126,209.93	$ 151,538.27
DUFFERIN:—			
Highway No. 9	$ 630.26	$ 19,942.65	$ 20,572.91
" No. 10		23,082.09	23,082.09
" No. 24	1,168.35	18,226.76	19,395.11
" No. 89	175.45	11,455.12	11,630.57
Connecting Link, Town of Orangeville		183.25	183.25
	$ 1,974.06	$ 72,889.87	$ 74,863.93
ELGIN:—			
Highway No. 3	$ 475.38	$ 32,852.50	$ 33,327.88
" No. 4		6,260.32	6,260.32
" No. 19		4,075.07	4,075.07
" No. 73	163.76	12,287.56	12,451.32
" No. 74	618.49	7,481.65	8,100.14
" No. 75		1,186.69	1,186.69
" No. 76	69.49	4,658.05	4,727.54
" No. 77	5.58	1,977.85	1,983.43
Connecting Link, Town of Aylmer		803.55	803.55
St. Thomas East Entrance		338.40	338.40
	$ 1,332.70	$ 71,921.64	$ 73,254.34

County	Construction	Maintenance	Total
ESSEX:—			
Highway No. 2	$ 306.92	$ 10,318.64	$ 10,655.56
" No. 2B		325.08	325.08
" No. 3	2,491.64	95,854.51	98,346.15
" No. 3B	511.58	2,580.55	3,092.13
" No. 18	144.83	18,856.22	19,001.05
" No. 18A	1,217.63	14,051.26	15,268.89
" No. 18B		495.29	495.29
" No. 39	780.12	4,109.61	4,889.73
" No. 98	451.66	13,441.65	13,893.31
" No. 98A		545.64	545.64
Pelee Island		3,167.22	3,167.22
Proposed Tilbury-Windsor Highway	341.02		341.02
Connecting Link, Town of Essex		125.40	125.40
Connecting Link, Town of Leamington		31.71	31.71
Connecting Link, Town of Harrow		8.20	8.20
Connecting Link, Town of LaSalle		179.37	179.37
Connecting Link, Town of Kingsville		329.39	329.39
Connecting Link, Town of Tecumseh		28.35	28.35
	$ 6,245.40	$ 164,478.09	$ 170,723.49
FRONTENAC:—			
Highway No. 2	$ 122.66	$ 17,245.72	$ 17,368.38
" No. 7	73.09	116,064.78	116,137.87
" No. 15	69.60	12,158.20	12,227.80
" No. 33	119.89	10,493.28	10,613.17
" No. 38	353.97	44,408.94	44,762.91
" No. 95		5,418.09	5,418.09
" No. 96		10,782.55	10,782.55
Proposed Four-Lane Highway North of Kingston	Cr. 1,055.54		Cr. 1,055.54
Howe Island Ferry Road	3,937.52		3,937.52
Development Roads —			
Highway No. 41-Plevna		4,109.39	4,109.39
Clarendon Road	740.61	3,708.95	4,449.56
Arden-Meyer's Cave	924.73		924.73
Wolfe Island Ferry	5,071.15		5,071.15
Controlled Access Highway Survey	224.71		224.71
	$ 10,582.39	$ 224,389.90	$ 234,972.29
GREY:—			
Highway No. 4		$ 26,195.43	$ 26,195.43
" No. 6		35,258.62	35,258.62
" No. 10	597.95	34,255.05	34,853.00
" No. 21		5,362.70	5,362.70
" No. 24		4,848.11	4,848.11
" No. 26	211.39	22,187.99	22,399.38
" No. 86	31.64		31.64
Connecting Link, Town of Durham		775.32	775.32
Connecting Link, Village of Chatsworth		109.31	109.31
Connecting Link, Town of Markdale		289.35	289.35
Connecting Link, Village of Flesherton		298.99	298.99
	$ 840.98	$ 129,580.87	$ 130,421.85
HALDIMAND:—			
Highway No. 3	$ 161.94	$ 38,639.20	$ 38,801.14
" No. 6	1,891.36	17,838.81	19,730.17
" No. 54	2,665.52	26,600.75	29,266.27
" No. 56	15,668.15	93,395.30	109,063.45
Connecting Link, Town of Dunnville		150.95	150.95
	$ 20,386.97	$ 176,625.01	$ 197,011.98

County	Construction	Maintenance	Total
HALTON:—			
Highway No. 2	$ 3,818.25	$ 37,269.14	$ 41,087.39
" No. 5	935.70	31,539.25	32,474.95
" No. 7		19,665.51	19,665.51
" No. 25		22,030.46	22,030.46
Queen Elizabeth Way	15,611.90	193,693.04	209,304.94
Lower Middle Road	13.63		13.63
Connecting Link, Town of Burlington		176.14	176.14
	$ 20,379.48	$ 304,373.54	$ 324,753.02
HASTINGS:—			
Highway No. 2	$ 775.59	$ 51,023.73	$ 51,799.32
" No. 7	785.74	33,409.58	34,195.32
" No. 14	8.37	14,934.21	14,942.58
" No. 28	13,796.22	13,359.70	27,155.92
" No. 33	369.41	3,624.65	3,994.06
" No. 37	71,234.02	72,138.64	143,372.66
" No. 62	3,993.68	81,430.10	85,423.78
Development Roads —			
Bancroft-Herman	125.04	2,678.74	2,803.78
Birds Creek-Baptiste Lake		1,495.85	1,495.85
Maynooth-Hastings Boundary		Cr. 1,122.91	Cr. 1,122.91
Bancroft-Haliburton Boundary		2,865.79	2,865.79
Bancroft-Calabogie Road	721.00		721.00
Bancroft-Renfrew	90.32		90.32
Bancroft-Wilberforce	244.79		244.79
	$ 92,144.18	$ 275,838.08	$ 367,982.26
HURON:—			
Highway No. 4	$ 1,409.14	$ 75,817.71	$ 77,226.85
" No. 8	2,350.75	12,552.56	14,903.31
" No. 9		1,266.40	1,266.40
" No. 21	12,169.06	194,403.40	206,572.46
" No. 23		2,750.22	2,750.22
" No. 81		5,236.03	5,236.03
" No. 83		25,919.06	25,919.06
" No. 84		11,489.90	11,489.90
" No. 86	1,604.39	47,886.70	49,491.09
" No. 87	1,546.05	11,067.73	12,613.78
Connecting Link, Village of Exeter		167.77	167.77
Connecting Link, Town of Clinton		152.11	152.11
Connecting Link, Town of Seaforth		9.81	9.81
Connecting Link, Town of Goderich		20.03	20.03
	$ 19,079.39	$ 388,739.43	$ 407,818.82
KENT:—			
Highway No. 2	$ 2,571.15	$ 38,120.94	$ 40,692.09
" No. 3	38.27	17,158.66	17,196.93
" No. 21		11,457.07	11,457.07
" No. 40	4,267.91	35,204.06	39,471.97
" No. 78		3,864.28	3,864.28
" No. 79		1,994.66	1,994.66
" No. 98	89.19	538.78	627.97
Middle Road		47,886.08	47,886.08
Connecting Link, Town of Dresden		170.50	170.50
Connecting Link, Town of Blenheim		40.50	40.50
Connecting Link, Town of Wallaceburg		1,130.10	1,130.10
Connecting Link, Town of Bothwell		31.42	31.42
	$ 6,966.52	$ 157,597.05	$ 164,563.57

County	Construction	Maintenance	Total
LAMBTON:—			
Highway No. 7	$ 135.17	$ 35,160.81	$ 35,295.98
" No. 21	1,213.46	34,762.43	35,975.89
" No. 22		2,700.79	2,700.79
" No. 40	567.29	40,966.79	41,534.08
" No. 79		20,994.35	20,994.35
" No. 80		2,268.02	2,268.02
" No. 82	3,034.14	74,814.55	77,848.69
Proposed Controlled Access Highway Survey	84.08		84.08
Hillsborough Beach to East of Forest	514.68		514.68
Sarnia-Strathroy	57.78		57.78
Connecting Link, Town of Thedford		49.15	49.15
	$ 5,606.60	$ 211,716.89	$ 217,323.49
LANARK:—			
Highway No. 7	$ 64.46	$ 6,023.52	$ 6,087.98
" No. 15	809.60	28,689.72	29,499.32
" No. 29	7,435.03	165,792.88	173,227.91
" No. 44	291.45	3,496.75	3,788.20
County Road 4C		1,040.00	1,040.00
Development Roads —			
Darling Township Line North to Darling Township South	323.75	4,469.13	4,792.88
Calabogie-Lanark	296.71		296.71
	$ 9,221.00	$ 209,512.00	$ 218,733.00
LEEDS AND GRENVILLE:—			
Highway No. 2	$ 491.11	$ 54,754.15	$ 55,245.26
" No. 15	560.87	65,961.78	66,522.65
" No. 16	60.70	11,975.84	12,036.54
" No. 29	762.04	10,892.31	11,654.35
" No. 32		4,265.09	4,265.09
" No. 42	797.18	96,331.04	97,128.22
River Road	74.60	52,263.83	52,338.43
Chaffey Lock Road		233.91	233.91
Controlled Access Highway Survey	944.12		944.12
	$ 3,690.62	$ 296,677.95	$ 300,368.57
LENNOX AND ADDINGTON:—			
Highway No. 2	$ 513.91	$ 10,972.95	$ 11,486.86
" No. 7		10,209.04	10,209.04
" No. 33	7.24	30,175.34	30,182.58
" No. 41	1,618.91	89,227.94	90,846.85
Bancroft-Renfrew	90.32		90.32
Controlled Access Highway Survey	425.50		425.50
	$ 2,655.88	$ 140,585.27	$ 143,241.15
LINCOLN:—			
Highway No. 8	$ 1,783.75	$ 26,758.72	$ 28,542.47
" No. 8A	1,722.00	2,894.30	4,616.30
" No. 20	219.24	16,299.20	16,518.44
" No. 57	156.47	2,890.94	3,047.41
" No. 58		1,303.00	1,303.00
Queen Elizabeth Way	1,262.72	116,232.25	117,494.97
	$ 5,144.18	$ 166,378.41	$ 171,522.59

County	Construction	Maintenance	Total
MIDDLESEX:—			
Highway No. 2	$ 5,622.30	$ 147,844.78	$ 153,467.08
" No. 4	2,981.29	29,663.37	32,644.66
" No. 7	1,938.89	92,935.24	94,874.13
" No. 22	963.04	17,012.03	17,975.07
" No. 23	1.00	4,812.69	4,813.69
" No. 73	5.75	10,284.06	10,289.81
" No. 74	109.20	2,281.61	2,390.81
" No. 80		10,982.24	10,982.24
" No. 81	420.60	32,856.93	33,277.53
Sarnia-Strathroy	57.78		57.78
	$ 12,099.85	$ 348,672.95	$ 360,772.80
NORFOLK:—			
Highway No. 3		$ 28,360.03	$ 28,360.03
" No. 6	948.46	44,836.43	45,784.89
" No. 19		814.99	814.99
" No. 24	3,408.91	13,756.80	17,165.71
" No. 59		954.44	954.44
Connecting Link, Town of Simcoe		54.82	54.82
	$ 4,357.37	$ 88,777.51	$ 93,134.88
NORTHUMBERLAND AND DURHAM:—			
Highway No. 2	$ 349.95	$ 109,045.46	$ 109,395.41
" No. 7A	225.93	23,832.39	24,058.32
" No. 28	238.68	20,322.34	20,561.02
" No. 30	521.44	55,610.72	56,132.16
" No. 33		3,957.36	3,957.36
" No. 35	439.40	22,251.82	22,691.22
" No. 45	1,861.91	27,428.94	29,290.85
Four-Lane Highway, Oshawa East	24,001.22		24,001.22
Controlled Access Highway Survey	2,507.43		2,507.43
Connecting Link, Town of Bowmanville		486.25	486.25
	$ 30,145.96	$ 262,935.28	$ 293,081.24
ONTARIO:—			
Highway No. 2	$ 176.17	$ 35,816.30	$ 35,992.47
" No. 7		19,360.92	19,360.92
" No. 7A		4,670.24	4,670.24
" No. 12	176.94	90,447.50	90,624.44
" No. 47	95.12	31,102.21	31,197.33
" No. 48		11,645.51	11,645.51
" No. 69	2,558.85	10,103.72	12,662.57
Four-Lane Highway, Oshawa East	1,303.54	63,106.82	64,410.36
Bobcaygeon-Kinmount	114.53		114.53
Controlled Access Highway Survey	922.99		922.99
Preliminary Surveys	48.49		48.49
	$ 5,396.63	$ 266,253.22	$ 271,649.85
OXFORD:—			
Highway No. 2	$ 664.72	$ 20,154.43	$ 20,819.15
" No. 3	651.28	892.60	1,543.88
" No. 19	1,322.08	20,883.43	22,205.51
" No. 53	424.05	4,781.47	5,205.52
" No. 59	1,714.59	45,829.66	47,544.25
" No. 97	1,268.41	17,198.84	18,467.25
" No. 100	1,332.03	16,338.86	17,670.89
	$ 7,377.16	$ 126,079.29	$ 133,456.45

County	Construction	Maintenance	Total
PEEL:—			
Highway No. 2	$ 2,195.39	$ 9,447.04	$ 11,642.43
" No. 5	6,260.74	21,037.66	27,298.40
" No. 7	10.00	12,311.33	12,321.33
" No. 9		6,802.32	6,802.32
" No. 10	157.32	50,252.32	50,409.64
" No. 24	440.53	12,192.88	12,633.41
" No. 27		104.60	104.60
" No. 50		22,823.92	22,823.92
" No. 51	440.53	2,874.22	3,314.75
Queen Elizabeth Way	842.85	46,665.59	47,508.44
Lower Middle Road	6.81		6.81
	$ 10,354.17	$ 184,511.88	$ 194,866.05
PERTH:—			
Highway No. 7	$ 102.76	$ 22,189.93	$ 22,292.69
" No. 8	134.32	97,347.69	97,482.01
" No. 19	534.00	21,809.10	22,343.10
" No. 23	941.53	45,809.04	46,750.57
" No. 83		4,141.82	4,141.82
" No. 86	274.61	14,866.93	15,141.54
" No. 100	454.09	1,304.11	1,758.20
Connecting Link, Town of Mitchell		11,999.27	11,999.27
Connecting Link, Town of Palmerston		347.20	347.20
Connecting Link, Town of Listowell		145.33	145.33
	$ 2,441.31	$ 219,960.42	$ 222,401.73
PETERBOROUGH:—			
Highway No. 7	$ 1,650.69	$ 46,552.13	$ 48,202.82
" No. 7A		517.71	517.71
" No. 28	1,958.34	67,634.40	69,592.74
" No. 30		4,306.77	4,306.77
" No. 36		18,762.90	18,762.90
" No. 45	40.09	7,263.87	7,303.96
Development Roads —			
Bobcaygeon-Kinmount	266.48		266.48
Catchacoma Road		5,125.44	5,125.44
Loon Lake Loop		7,334.53	7,334.53
Connecting Lake, Village of Lakefield	2,227.45	57.99	2,285.44
	$ 6,143.05	$ 157,555.74	$ 163,698.79
PRESCOTT AND RUSSELL:—			
Highway No. 17	$ 1,242.15	$ 39,183.81	$ 40,425.96
" No. 34		29,898.22	29,898.22
Connecting Link, Town of Hawkesbury		93.60	93.60
	$ 1,242.15	$ 69,175.63	$ 70,417.78
PRINCE EDWARD:—			
Highway No. 14		$ 10,195.42	$ 10,195.42
" No. 33		13,341.07	13,341.07
" No. 41	2,485.33	7,760.08	10,245.41
Connecting Link, Town of Picton		331.92	331.92
	$ 2,485.33	$ 31,628.49	$ 34,113.82

County	Construction	Maintenance	Total
RENFREW:—			
Highway No. 17	$ 17,453.92	$ 176,757.19	$ 194,211.11
" No. 28	226.95		226.95
" No. 29		518.55	518.55
" No. 41	284.30	35,135.52	35,419.82
" No. 60	846.35	59,253.85	60,100.20
" No. 62	4,800.67	101,345.87	106,146.54
Development Roads —			
Burnstown-Black Donald Mine, Calabogie-Darling Township Line	1,528.71	19,578.55	21,107.26
Highway No. 17-Kelly's Corners		10,998.72	10,998.72
Combermere-Burgess Mine		1,349.86	1,349.86
Combermere-Quadville		4,998.47	4,998.47
Killaloe-Round Lake		4,371.39	4,371.39
Killaloe-Brudenell		2,560.47	2,560.47
Eganville-Cormac		3,332.86	3,332.86
Dacre-Hyndford		1,667.64	1,667.64
Dacre-Shamrock		1,093.17	1,093.17
Eganville-Kelly's Corners		3,823.00	3,823.00
Bancroft-Renfrew	2,754.07		2,754.07
Dacre-Renfrew	260.55		260.55
	$ 28,155.52	$ 426,785.11	$ 454,940.63
SIMCOE:—			
Highway No. 9		$ 10,446.35	$ 10,446.35
" No. 11	663.35	53,206.51	53,869.86
" No. 12	1,753.11	206,173.38	207,926.49
" No. 24	1,171.98	23,907.38	25,079.36
" No. 26	1,192.57	33,652.98	34,845.55
" No. 27	196.69	89,557.30	89,753.99
" No. 88		6,768.53	6,768.53
" No. 89	20.46	26,070.22	26,090.68
" No. 90	204.09	19,679.75	19,883.84
" No. 91	114.40	7,331.33	7,445.73
" No. 92		4,014.14	4,014.14
" No. 93		13,323.34	13,323.34
Proposed Toronto-Barrie Highway	27,986.01		27,986.01
Barrie-Parry Sound	128.58		128.58
Waubaushene-Port Severn	478.27	4,706.94	5,185.21
	$ 33,909.51	$ 498,838.15	$ 532,747.66
STORMONT, DUNDAS AND GLENGARRY:—			
Highway No. 2		$ 53,896.72	$ 53,896.72
" No. 31	118.89	15,948.34	16,067.23
" No. 34	12,230.52	19,356.26	31,586.78
" No. 43	1,649.35	26,121.43	27,770.78
Controlled Access Highway Survey	24.15		24.15
	$ 14,022.91	$ 115,322.75	$ 129,345.66
VICTORIA:—			
Highway No. 7	$ 160.66	$ 27,347.51	$ 27,508.17
" No. 35	81.52	35,394.55	35,476.07
" No. 36	7.64	14,387.95	14,395.59
" No. 46	234.34	30,213.19	30,447.53
Development Roads —			
Highway No. 46-Seabright-Uphill-Norland		20,689.09	20,689.09
Norland-Kinmount-Bobcaygeon-Burnt River Road	755.72	59,293.34	60,049.06
Connecting Link, Town of Lindsay		570.20	570.20
	$ 1,239.88	$ 187,895.83	$ 189,135.71

County	Construction	Maintenance	Total
WATERLOO:—			
Highway No. 7		$ 7,455.95	$ 7,455.95
" No. 8		20,316.58	20,316.58
" No. 24	94.22	6,305.18	6,399.40
" No. 24A		8,037.69	8,037.69
" No. 85		4,876.39	4,876.39
" No. 86	242.00	16,359.28	16,601.28
" No. 97	232.22	4,071.72	4,303.94
Connecting Link, Town of New Hamburg		162.01	162.01
Connecting Link, Town of Elmira		15.34	15.34
Connecting Link, Town of Hespeler		705.45	705.45
	$ 568.44	$ 68,305.59	$ 68,874.03
WELLAND:—			
Highway No. 3	$ 1,345.79	$ 22,696.47	$ 24,042.26
" No. 3A	1,293.09	10,481.26	11,774.35
" No. 3C	22.12	3,674.55	3,696.67
" No. 8	589.18	3,259.98	3,849.16
" No. 20	1,339.50	11,097.58	12,437.08
" No. 57	469.40	5,323.03	5,792.43
" No. 58	469.40	55,755.39	56,224.79
Queen Elizabeth Way	7,251.88	62,394.20	69,646.08
	$ 12,780.36	$ 174,682.46	$ 187,462.82
WELLINGTON:—			
Highway No. 6	$ 500.75	$ 44,600.26	$ 45,101.01
" No. 7		10,366.20	10,366.20
" No. 9	1,031.66	29,093.82	30,125.48
" No. 23		1,703.68	1,703.68
" No. 24	661.37	26,115.44	26,776.81
" No. 86	157.33	9,418.42	9,575.75
" No. 87	339.09	3,577.90	3,916.99
Connecting Link, Town of Harriston		162.08	162.08
Connecting Link, Town of Mt. Forest		273.27	273.27
Connecting Link, Town of Fergus		112.52	112.52
	$ 2,690.20	$ 125,423.59	$ 128,113.79
WENTWORTH:—			
Highway No. 2	$ 562.29	$ 51,539.60	$ 52,101.89
" No. 2A	5,326.19	13,330.96	18,657.15
" No. 5	193.39	31,605.58	31,798.97
" No. 6	2,760.70	30,792.69	33,553.39
" No. 8	1,361.17	48,374.19	49,735.36
" No. 20	138.22	27,312.12	27,450.34
" No. 20A		617.88	617.88
" No. 52		11,091.92	11,091.92
" No. 53		8,839.68	8,839.68
" No. 55		2,972.04	2,972.04
" No. 56	5,638.93	11,287.40	16,926.33
" No. 97		7,132.47	7,132.47
" No. 99		13,554.03	13,554.03
Queen Elizabeth Way	4,975.16	28,849.29	33,824.45
Burlington Beach	234.69	4,133.04	4,367.73
Dundas Diversion		7,146.68	7,146.68
N. Dundas-Freelton	2,827.12		2,827.12
Intersection No. 2 and 6-Greensville	239.16		239.16
	$ 24,257.02	$ 298,579.57	$ 322,836.59

County	Construction	Maintenance	Total
York:—			
Highway No. 2	$ 1,807.70	$ 50,226.08	$ 52,033.78
" No. 5	1,227.45	17,424.99	18,652.44
" No. 5A		15,568.95	15,568.95
" No. 7	588.47	38,397.03	38,985.50
" No. 11	690.82	61,678.33	62,369.15
" No. 27	431.78	111,480.65	111,912.43
" No. 47	10.53		10.53
" No. 49		3,399.78	3,399.78
Queen Elizabeth Way	914.58	28,084.84	28,999.42
Four-Lane Highway, Toronto East	20,402.06	9,323.53	29,725.59
Proposed Toronto-Barrie Highway	61,019.23		61,019.23
Queen Street-Lake Shore Road-Brown's Line		9,528.87	9,528.87
Malton Airport Road	15.04		15.04
Connecting Link, Town of Mimico		5,520.06	5,520.06
Connecting Link, Town of New Toronto		5,653.89	5,653.89
Connecting Link, Village of Long Branch		870.68	870.68
Connecting Link, Village of Port Credit		1,117.40	1,117.40
	$ 87,107.66	$ 358,275.08	$ 445,383.74

District	Construction	Maintenance	Total
HALIBURTON:—			
Highway No. 28	$ 1,505.50	$ 13,503.40	$ 15,008.90
" No. 35	6,827.30	46,342.60	53,169.90
" No. 60	2.56	4,160.70	4,163.26
Development Roads —			
Minden-Hastings County Boundary	114.82	164,168.12	164,282.94
Kinmount-Hastings County Boundary	82.55	25,061.44	25,143.99
Haliburton-Redstone		5,575.38	5,575.38
Minden-Kinmount		9,000.94	9,000.94
Bancroft-Wilberforce	224.79		224.79
Minden-Haliburton	307.82		307.82
Haliburton-Whitney	1,682.72		1,682.72
Harcourt Road	175.23		175.23
	$ 10,923.29	$ 267,812.58	$ 278,735.87
MUSKOKA:—			
Highway No. 11	$ 132.07	$ 103,308.10	$ 103,440.17
" No. 35		32,095.03	32,095.03
" No. 60	25.81	19,106.95	19,132.76
" No. 69		22,886.70	22,886.70
Development Roads —			
Honey Harbour-Port Severn		8,179.55	8,179.55
Highway No. 11-Muskoka-Cottage Sanitarium		181.97	181.97
Highway No. 35-Bracebridge-Dorset		26,016.97	26,016.97
Bracebridge-Glen Orchard		15,642.27	15,642.27
Huntsville-Baysville		5,493.13	5,493.13
Falkenburg-Rosseau		29,464.32	29,464.32
Port Sydney-Windermere		15,974.95	15,974.95
Interlaken Road		3,282.93	3,282.93
Barrie-Parry Sound	175.47		175.47
Connecting Link, Town of Bracebridge		286.70	286.70
Connecting Link, Town of Huntsville		1,820.90	1,820.90
Unincorporated Townships —			
Sinclair Township		1,063.56	1,063.56
Baxter Township		1,005.00	1,005.00
	$ 333.35	$ 285,809.03	$ 286,142.38

District	Construction	Maintenance	Total
NIPISSING:—			
Highway No. 11	$ 6,790.20	$ 164,300.80	$ 171,091.00
" No. 17	5,611.61	108,753.05	114,364.66
" No. 60	3,066.81	36,142.85	39,209.66
" No. 62A	48.50		48.50
" No. 63	1,355.80	37,132.26	38,488.06
" No. 64	1,985.40	23,013.61	24,999.01
" No. 94		3,287.41	3,287.41
Development Roads —			
East Boundary Nipissing-Hagar	633.68		633.68
South Boundary Nipissing-North Boundary Sisk	831.06		831.06
North Boundary Nipissing-Temiskaming	449.74		449.74
Field-Highway No. 11	1,898.14		1,898.14
Mattawa-Harrington Creek		1,134.35	1,134.35
Highway No. 11-Airport		1,845.85	1,845.85
Verner-Lavigne-Muskrat Creek	311.44	21,130.50	21,441.94
Field River Valley-Afton Mine		10,904.15	10,904.15
Warren-River Valley		22,171.58	22,171.58
Hagar-Rutter-Bigwood-Wolseley Bay		61,064.72	61,064.72
Old Highway No. 11		1,921.57	1,921.57
Madawaska-Cross Lake		2,271.11	2,271.11
Highway No. 60-Hastings Boundary		Cr. 76.59	Cr. 76.59
French River-Lavigne	870.49		870.49
Mining Roads —			
Cuniptan Road and Spurs		10.13	10.13
Unincorporated Townships —			
Sproule Township		113.36	113.36
Phelps Township		1,246.42	1,246.42
Grant Township		119.10	119.10
Bastedo Township		28.86	28.86
Gibbons Township		8,142.60	8,142.60
Badgero Township		1,288.19	1,288.19
Crerar Township		1,030.99	1,030.99
Hugel Township		2,542.17	2,542.17
Kirkpatrick Township		2,244.87	2,244.87
McPherson Township		2,132.94	2,132.94
London Township		928.49	928.49
Falconer Township		862.92	862.92
Scollard Township		336.50	336.50
Henry Township		1,514.41	1,514.41
Delamere Township		736.11	736.11
Bigwood Township		2,415.78	2,415.78
Lauder Township		181.17	181.17
Beaucage Township		21.60	21.60
Pedley Township		112.06	112.06
Patterson Township		1,577.58	1,577.58
Gurd Township		4,294.90	4,294.90
Pringle Township		2,162.70	2,162.70
Wilson and McConkey Township		1,874.36	1,874.36
Mills and Hardy Township		4,526.22	4,526.22
Airy Township		546.22	546.22
Murchison Township		1,947.22	1,947.22
Sabine Township		736.19	736.19
	$ 23,852.87	$ 538,671.28	$ 562,524.15

District	Construction	Maintenance	Total
PARRY SOUND:—			
Highway No. 11		$ 62,480.55	$ 62,480.55
" No. 69	184.01	50,885.26	51,069.27
Development Roads —			
Rossean-Hayes Corners		8,342.86	8,342.86
Highway No. 11-Highway No. 69		16,357.14	16,357.14
Burks Falls-Highway No. 69		50,694.53	50,694.53
Dunchurch-Ardbeg		4,462.43	4,462.43
Sundridge-Magnetawan Spur		13,134.18	13,134.18
Highway No. 69-Bayfield Inlet		311.87	311.87
Powassan Westerly		13,281.89	13,281.89
Trout Creek-Loring-Restoule	171.43	38,325.53	38,496.96
Barrie-Parry Sound	222.37		222.37
Wallbridge Township		752.30	752.30
Unincorporated Townships —			
Conger Township		577.12	577.12
Montieth Township		1,495.00	1,495.00
Bethune Township		1,044.54	1,044.54
Proudfoot Township		960.99	960.99
Spence Township		2,578.83	2,578.83
Ferguson Township		742.12	742.12
Burpee Township		65.38	65.38
Croft Township		2,909.01	2,909.01
Laurier Township		1,163.24	1,163.24
Lount Township		2,042.73	2,042.73
Ferrie Township		103.19	103.19
McKenzie Township		1,572.93	1,572.93
Wallbridge Township		834.32	834.32
North Wallbridge and Henvey Townships		1,558.21	1,558.21
	$ 577.81	$ 276,676.15	$ 277,253.96

District	Construction	Maintenance	Total
TEMISKAMING:—			
Highway No. 11	$ 6,547.53	$ 71,133.32	$ 77,680.85
" No. 65	6.08	50,938.34	50,944.42
" No. 66	66,320.60	121,000.94	187,321.54
Development Roads —			
Lorrain Road		4,577.04	4,577.04
Haileybury West Road		7,968.70	7,968.70
North Temiskaming Road		6,864.33	6,864.33
North Road		9,532.74	9,532.74
McCool-Thornloe-Earlton		1,926.70	1,926.70
Charlton Road	6,522.83	8,264.27	14,787.10
Boston Creek and Spurs	1,972.29	1,626.31	3,598.60
Charlton Elk Lake Road		4,459.50	4,459.50
Gowganda Road and Spurs		28,324.04	28,324.04
Larder Lake Station Road		126.87	126.87
Kenogami Station Road		339.45	339.45
Sesekinika Road		2,435.26	2,435.26
Winston to Highway No. 11	147.03		147.03
Mining Roads —			
Ashley Road		4,534.92	4,534.92
Silverado Road		739.67	739.67
Bidgood Road		549.19	549.19
Martin-Bird Road		1,546.73	1,546.73
Crystal Beach and Upper Canada		228.22	228.22
Cheminis Road		1,099.14	1,099.14
Unincorporated Townships —			
Lorrain Township		54.00	54.00
Firstbrook Township		3.25	3.25
Ingram Township		1,457.84	1,457.84
Pense Township		39.00	39.00
Marter Township	361.12	7,816.92	8,178.04
Pacaud Township	982.56	2,371.68	3,354.24
Robillard Township	573.89	3,038.18	3,612.07
Sharpe Township		1,286.20	1,286.20
Bryce Township		265.57	265.57
Beauchamp Township	590.95	3,055.92	3,646.87
Savard Township		3,456.06	3,456.06
Henwood Township		3,360.48	3,360.48
Cane Township		1,613.45	1,613.45
Tudhope Township		112.20	112.20
Marquis Township		1,657.35	1,657.35
Otto Township		1,542.48	1,542.48
Eby Township		1,349.04	1,349.04
Gillies Limit		14.90	14.90
Benoit Township		942.38	942.38
Morrisette Township		2,000.00	2,000.00
	$ 84,024.88	$ 363,652.58	$ 447,677.46

District	Construction	Maintenance	Total
COCHRANE:—			
Highway No. 11	$ 34,652.13	$ 283,749.71	$ 318,401.84
" No. 67	89.46	85,522.39	85,611.85
" No. 101		23,489.01	23,489.01
Development Roads —			
Munro Road		3,643.78	3,643.78
Bayside-Beach Road		2,332.11	2,332.11
Shillington-Iroquois Road		27,665.79	27,665.79
Timmins Back Road		12,285.67	12,285.67
Sandey Falls West Road		5,570.94	5,570.94
Holtyre Road		1,685.17	1,685.17
Coulson Road		284.53	284.53
Matheson Easterly	234.13		234.13
Nellie Lake-Iroquois Falls		737.17	737.17
Iroquois Falls-Monteith Road		997.99	997.99
Cochrane-Norembega Road		8,473.83	8,473.83
Cochrane-Gardiner Road		5,993.81	5,993.81
Moonbeam-Remi Lake Road		1,231.22	1,231.22
Hearst-Lake St. Therese Road		3,881.06	3,881.06
Coppell-Meade Road	94.27		94.27
Hearst-Coppell Road		4,436.56	4,436.56
Mining Roads —			
Kamiskotia Road		40.33	40.33
Spurs off Timmins Back Road		2,979.11	2,979.11
Goldhawk Road	44,205.10	230.08	44,435.18
Aquaries Porcupine Road	8,000.00		8,000.00
Night Hawk Lake Road	8.00		8.00
Unincorporated Townships —			
Beatty Township		62.05	62.05
Bond Township		119.80	119.80
Bowman Township		1,009.36	1,009.36
Carr Township		169.12	169.12
Clergue Township		62.83	62.83
Currie Township		2,456.98	2,456.98
German Township		27.00	27.00
Hislop Township		4,229.44	4,229.44
Matheson Township		202.15	202.15
McCann and McEavy Townships		22.50	22.50
Mountjoy Township	840.35	12,255.44	13,095.79
Shaw Township		1,041.12	1,041.12
Stock Township		936.37	936.37
Taylor Township		436.31	436.31
Walker Township	248.53	34.40	282.93
Macklem and Thomas Townships		1,364.90	1,364.90
Murphy Township		898.00	898.00
Pyne Township		2,300.77	2,300.77
Fox and Brower Townships		1,906.32	1,906.32
Kennedy Township		1,766.17	1,766.17
Lamarche Township		3,089.15	3,089.15
Fournier Township		3,893.88	3,893.88
Clute-Frederickhouse Section Township		1,886.97	1,886.97
Clute and Leitch Townships		3,796.03	3,796.03
Nansen Township		788.01	788.01
McCart Township		186.31	186.31
Newmarket Township		55.00	55.00
Brower Township		344.97	344.97
Blount Township		1,469.22	1,469.22
Clute Township		392.58	392.58
Calder Township		59.17	59.17
Colquhoun Township		59.83	59.83
Kendry Township		223.25	223.25
Haggart Township		204.73	204.73
O'Brien Township		64.50	64.50
Owens Township		201.18	201.18
Williamson Township		15.50	15.50
Idington Township		40.00	40.00
Eilber Township		20.00	20.00
Hanlan Township		101.54	101.54
	$ 88,371.97	$ 523,423.11	$ 611,795.08

District	Construction	Maintenance	Total
SUDBURY:—			
Highway No. 17	$ 12,873.53	$ 122,422.64	$ 135,296.17
" No. 68		26,818.28	26,818.28
" No. 69	622.29	23,493.77	24,116.06
Development Roads —			
Hagar North Road		962.90	962.90
Wahnapitae-Wanup Road	888.18	4,047.86	4,936.04
Sudbury Highway No. 17-Falconbridge		3,338.27	3,338.27
Garson-Skead		5,758.08	5,758.08
Hanmer-Bailey's Corners		2,961.00	2,961.00
Sudbury-Milnet	1,434.17	14,929.43	16,363.60
Sudbury-Frood		4,863.92	4,863.92
Sudbury-Levack	5,879.64	44,768.01	50,647.65
Highway No. 69-Long Lake	19,354.23	3,406.70	22,760.93
Kelley Lake-Long Lake		1,578.80	1,578.80
Highway No. 17-Creighton Mine	8,245.95	1,660.76	9,906.71
Whitefish-Lake Penage		14,079.92	14,079.92
Chapleau South	6,055.41		6,055.41
Gogama-Three Duck Lake		217.00	217.00
Metagama-Round Lake	6.95		6.95
Sudbury-Capreol	337.53		337.53
Burwash-Lake Nipawassi	127.61		127.61
French River-Lavigne	870.49		870.49
Sudbury-Burwash	41.10		41.10
Old Overhead-Shakespeare Township	5.14	386.02	391.16
Espanola-Lake Penage		1,407.59	1,407.59
Unincorporated Townships —			
Norman Township		1.61	1.61
Dieppe Township		105.92	105.92
Mongowin Township		29.01	29.01
Curtin Township		64.95	64.95
Foster Township		524.73	524.73
Hawley Township		206.28	206.28
Falconbridge Township		109.76	109.76
Capreol Township		460.08	460.08
Lumsden Township		335.74	335.74
Morgan Township		882.90	882.90
Fairbank Township		226.06	226.06
Creighton Township		46.66	46.66
Lorne Township		2,079.96	2,079.96
Louise Township		1,040.55	1,040.55
Snider Township		289.90	289.90
Trill Township		73.82	73.82
Secord Township		239.36	239.36
Burwash Township		242.33	242.33
Dill Township		414.22	414.22
Broder Township		1,134.58	1,134.58
Cleland Township		1,313.48	1,313.48
Dryden Township		1,603.74	1,603.74
Awrey Township		381.46	381.46
Loughrin Township		575.85	575.85
	$ 56,742.22	$ 289,483.90	$ 346,226.12

District	Construction	Maintenance	Total
ALGOMA-MANITOULIN:—			
Highway No. 17	$ 40,800.66	$ 267,251.72	$ 308,052.38
" No. 68	58,317.52	36,966.19	95,283.71
Development Roads —			
Little Current-South Baymouth	4,133.07	29,539.61	33,672.68
Intersection, Little Current-South Baymouth, West Bay and Mindemoya-Gore Bay		17,875.25	17,875.25
South Baymouth-Gore Bay	1.24	18,316.28	18,317.52
Little Current-Gore Bay	5,587.22	44,323.76	49,910.98
Gore Bay-Meldrum Bay	8,298.65	11,446.67	19,745.32
Gore Bay-Meldrum Bay-Barrie Island		243.82	243.82
Sable River Road		7,856.47	7,856.47
Old Highway No. 17-Algoma Mills		1,496.71	1,496.71
Matinenda Road		2,003.86	2,003.86
Lake Duborne Road		1,805.42	1,805.42
Mississauga River Road		22,245.54	22,245.54
White River Road		1,844.67	1,844.67
Thessalon-Wharncliffe Road		4,270.77	4,270.77
Bruce-Dunn Valley Road		5,648.73	5,648.73
St. Joseph Island Belt Line		42,212.70	42,212.70
Gros Cap Road		10810.43	10,810.43
Point Aux Pins Road		1,037.70	1,037.70
Searchmount-Wabos Road		28,624.49	28,624.49
Goulais Bay-White Birches Road		757.78	757.78
Batchawana Village Road		1,979.22	1,979.22
Michipicoten Area Roads		4,726.49	4,726.49
Hawk Lake Road		70.88	70.88
Iron Bridge-Chapleau	1,297.87		1,297.87
Mindemoya-Manitowaning	82.38		82.38
Preliminary Surveys	85.77		85.77
Unincorporated Townships —			
Dawson Township		439.73	439.73
Robinson Township		1,464.32	1,464.32
Mills Township		973.49	973.49
Campbell Township		2,716.83	2,716.83
Sheshegwaning Indian Reserve		191.44	191.44
Manitoulin Island Unceded Indian Reserve		1,520.44	1,520.44
Whitefish Indian Reserve		74.59	74.59
Shakespeare Township		2,627.46	2,627.46
Salter Broken Front Township		72.86	72.86
Victoria Township		2,823.97	2,823.97
Shedden Township		781.10	781.10
Lewis Township		188.41	188.41
Serpent River Reserve		10.50	10.50
Striker Township		594.60	594.60
Cobden Township		44.00	44.00
Mississauga Reserve		269.92	269.92
Patton Township		1,124.53	1,124.53
Bright Township		263.06	263.06
Gladstone Township		2,121.21	2,121.21
Parkinson Township		49.50	49.50
Grassette Township		75.13	75.13
Gould Township		133.22	133.22
Wells Township		559.33	559.33
Kirkwood Township		250.30	250.30
Bridgland Township		579.01	579.01
Houghton Township		396.15	396.15
Galbraith Township		1,494.30	1,494.30
Rose Township		317.65	317.65
Plummer Township		1,278.34	1,278.34
Aberdeen Township		1,835.35	1,835.35

District	Construction	Maintenance	Total
ALGOMA-MANITOULIN—Cont.			
Unincorporated Townships—Cont.			
Garden River Reserve		4,033.49	4,033.49
Pennefather Township		1,211.67	1,211.67
Fenwick Township		112.48	112.48
Vankoughnet Township		194.39	194.39
Hodgins Township		945.08	945.08
Gaudette Township		1,113.30	1,113.30
Shields Township		337.85	337.85
Haviland Township		165.59	165.59
Whitman Township		1,196.20	1,196.20
Curtis Township		409.40	409.40
3-H Ranger Lake Road Township		170.26	170.26
Kars Township		45.00	45.00
Spanish Reserve		1,187.61	1,187.61
Fisher Township		169.08	169.08
Morin Township		248.65	248.65
3-E Township		740.51	740.51
	$ 118,604.38	$ 600,906.46	$ 719,510.84
FORT WILLIAM:—			
Highway No. 11	$ 43,135.73	$ 74,793.45	$ 117,929.18
" No. 17	22,012.56	331,448.34	353,460.90
" No. 17A	94.71	34,422.41	34,517.12
" No. 61	6,380.41	53,894.53	60,274.94
Development Roads —			
Oliver Road		20,618.76	20,618.76
Silver Mountain Road		20,580.61	20,580.61
Kakabeka-Nolalu Road		13,096.58	13,096.58
Hymers-Scoble Road	552.19	19,627.55	20,179.74
Pearson-Pardee Loop		16,106.14	16,106.14
Kashabowie Road		4,488.82	4,488.82
Devon Road		2,429.08	2,429.08
Nipigon-Hydro	76.11		76.11
South Lybster Road	191.53		191.53
Dog Lake Road		12,111.34	12,111.34
Silver Islet Road		8,673.84	8,673.84
Nakina		715.93	715.93
Armstrong		266.10	266.10
White River		367.16	367.16
Sand River		160.18	160.18
Mining Roads —			
Leitch Gold Mine Road	4,173.95		4,173.95
Unincorporated Townships —			
Marks Township		1,409.67	1,409.67
Lybster Township		2,782.04	2,782.04
Strange Township		1,375.76	1,375.76
Devon Township		427.99	427.99
Scoble Township		1,573.46	1,573.46
Pearson Township		1,524.05	1,524.05
Dawson Road Lots		2,051.71	2,051.71
Forbes Township		2,152.61	2,152.61
Goldie Township		255.17	255.17
Upsala Township		800.60	800.60
Gorham Township		4,072.32	4,072.32
Ware Township		5,294.61	5,294.61
Jacques Township		1,041.23	1,041.23
Fowler Township		163.77	163.77
Sibley Township		819.98	819.98
Dorion Township		2,192.22	2,192.22
Stirling Township		752.06	752.06
Lyons Township		11.02	11.02
	$ 76,617.19	$ 642,501.09	$ 719,118.28

District	Construction	Maintenance	Total
KENORA:—			
Highway No. 17	$ 1,737.59	$ 122,773.53	$ 124,511.12
" No. 70		87,616.15	87,616.15
" No. 72	12.20	40,881.74	40,893.94
Development Roads —			
Dyment Road		247.16	247.16
Rice Lake School Van Road		2,640.17	2,640.17
Richan Road		5,164.65	5,164.65
Eton-Rugby Road		3,269.99	3,269.99
South Aubrey Road		4,696.91	4,696.91
Quibell, Clay Lake Road		4,627.89	4,627.89
East Melick-Coker Road		5,870.08	5,870.08
Rabbit Lake Road		3,793.42	3,793.42
Redditt Road		6,404.45	6,404.45
Pellatt Loop Road	5,999.51	22,973.28	28,972.79
Mining Roads —			
Madsen-Red Lake Road	665.55		665.55
Central Patricia to Hooker's Landing	536.58		536.58
Lunward Gold Mine Road	2,000.00		2,000.00
Quibell-Red Lake	36,281.02		36,281.02
Unincorporated Townships —			
Aubrey Township		802.66	802.66
Boys Township	100.17	684.96	785.13
Britton Township		745.54	745.54
Code Township	33.55		33.55
C. P. R. No. 38 Township		131.61	131.61
Eton Township		2,347.67	2,347.67
Godson Township	1,090.26	24.40	1,114.66
Godson and Philip Townships		39.50	39.50
Jordan Township		99.20	99.20
Kirkup Township	91.91	140.42	232.33
Melgund Township		830.42	830.42
Mutrie Township		3,382.77	3,382.77
Pellatt Township		2,147.84	2,147.84
Redvers Township		4.95	4.95
Rowell Township		1,084.52	1,084.52
Rugby Township		883.84	883.84
Southwork Township		1,239.14	1,239.14
Vermilion Additional Township		1,587.97	1,587.97
Wabigoon Township		2,922.94	2,922.94
Wainwright Township		1,450.97	1,450.97
Zealand Township		3,502.64	3,502.64
Unorganized Territory South of Haycock Township		4.41	4.41
Unorganized Territory South of Jaffray Township		11.46	11.46
Unorganized Territory South of Melgund Township		259.94	259.94
Unorganized Territory South of Pellatt Township		224.46	224.46
	$ 48,548.34	$ 335,513.65	$ 384,061.99

District	Construction	Maintenance	Total
RAINY RIVER:—			
Highway No. 70	$ 1,704.68	$ 31,756.15	$ 33,460.83
" No. 70A		4,399.97	4,399.97
" No. 71	1,132.88	61,650.78	62,783.66
Development Roads —			
Stratton Road	214.79	9,189.06	9,403.85
Sleeman Road	189.00	9,128.75	9,317.75
Spohn-Dearlock Road	45.70	26,245.63	26,291.33
River Road	34.95	41,817.83	41,852.78
Crozier Road		3,877.80	3,877.80
Devlin Road		18,656.97	18,656.97
Clearwater Lake Road		2,537.88	2,537.88
Arbor Vitae Road		6,703.16	6,703.16
Unincorporated Townships —			
Miscampbell Township		840.57	840.57
Dance Township		657.26	657.26
Sifton Township	83.15	1,067.27	1,150.42
Dewart Township		652.92	652.92
Sutherland Township		1,135.02	1,135.02
Nelles Township		1,743.77	1,743.77
Spohn Township		631.39	631.39
Unorganized Territory		40.00	40.00
	$ 3,405.15	$ 222,732.18	$ 226,137.33
Stock (Materials, etc.)*		2,716.78	2,716.78
Lands and Buildings	52,148.83	90,596.81	142,745.64
Weigh Scales		9,781.58	9,781.58
Road Equipment, etc.		518,235.82	518,235.82
Division Offices Expense and Engineering		454,393.71	454,393.71
Net General Expense, etc.	29,568.53	87,650.09	117,218.62
	$1,129,745.35	$13,003,667.39	$14,133,412.74

* Inventories, March 31st, 1946	$ 839,295.45
Inventories, March 31st, 1945	836,578.67
Increase	$ 2,716.78

APPENDIX No. 2
GROSS EXPENDITURE BY ROADS
April 1st, 1945, to March 31st, 1946

Highway No.	Location	Mileage	Construction	Maintenance	Total
2	Windsor-Quebec Boundary	541.1	$ 22,046.12	$ 730,525.23	$ 752,571.35
2A	Hamilton West Limits-Campbells Corners	4.20	5,326.19	13,330.96	18,657.15
2B	Highway No. 2 (Howard Avenue - Highway No. 3, Dougall Avenue)	5.89		325.08	325.08
3	Windsor-Fort Erie	260.	5,164.30	236,453.97	241,618.27
3A	Chambers Corners-St. Catharines-Niagara Falls	24.8	1,293.09	10,481.26	11,774.35
3B	Junction Highway No. 3-Windsor	6.	511.58	2,580.55	3,092.13
3C	Ridgeway-Fort Erie	7.5	22.12	3,674.55	3,696.67
4	Port Stanley-Flesherton	155.5	5,147.53	195,477.10	200,624.63
5	Toronto-Paris	64.01	8,617.28	158,974.20	167,591.48
5A	Leaside-Kingston Road	8.4		15,568.95	15,568.95
6	Port Dover-Tobermory	225.1	14,086.41	237,743.75	251,830.16
7	Sarnia-Ottawa	465.	5,567.71	497,449.48	503,017.19
7A	Manchester-Peterborough	42.	225.93	29,020.34	29,246.27
8	Niagara Falls-Goderich	155.7	6,219.17	208,609.72	214,828.89
8A	St. Davids-Niagara Falls	2.96	1,722.00	2,894.30	4,616.30
9	Schomberg-Kincardine	112.8	2,277.39	94,162.49	96,439.88
10	Port Credit-Owen Sound	105.	755.27	107,589.46	108,344.73
11	Toronto-Hearst-Geraldton-Nipigon	903.85	92,611.83	874,650.77	967,262.60
12	Whitby-Midland	97.7	1,930.05	296,620.88	298,550.93
14	Picton-Marmora	51.4	8.37	25,129.63	25,138.00
15	Ottawa-Kingston	131.	1,451.66	121,526.37	122,978.03
16	Ottawa-Prescott	62.3	3,694.82	40,280.81	43,975.63
17	Quebec Boundary - Montreal River and Schreiber-Manitoba Boundary	1133 7	116,225.53	1,198,800.91	1,315,026.44
17A	Port Arthur-Highway No. 17	21.3	94.71	34,422.41	34,517.12
18	Leamington-Windsor	49.	144.83	18,856.22	19,001.05
18A	Kingsville-Highway No. 18	18.	1,217.63	14,051.26	15,268.89
18B	Ruthven-Highway No. 18	1.		495.29	495.29
19	Port Burwell-Tralee	92.2	1,856.08	47,582.59	49,438.67
20	Niagara Falls-Burlington	53.3	1,696.96	54,708.90	56,405.86
20A	Junction Highway No. 20-Hamilton Limits	1.36		617.88	617.88
21	Morpeth-Owen Sound	207.	14,662.19	295,566.44	310,228.63
22	London-Sarnia	66.8	1,020.82	19,712.82	20,733.64
23	London-Arthur	86.3	942.53	55,075.63	56,018.16
24	Port Dover-Collingwood	143.4	10,623.97	123,658.95	134,282.92
24A	Paris-Galt	13.1		12,694.95	12,694.95
25	Burlington-Acton	29.8		22,030.46	22,030.46
26	Barrie-Owen Sound	74.6	1,403.96	55,840.97	57,244.93
27	Long Branch-Midland-Penetang	91.8	628.47	201,142.55	201,771.02
28	Port Hope-Apsley-Bancroft	95.5	17,725.69	114,819.84	132,545.53
29	Brockville-Arnprior	76.4	8,197.07	182,980.82	191,177.89
30	Brighton-Havelock	32.	521.44	59,917.49	60,438.93
31	Morrisburg-Ottawa	48.4	4,267.72	47,576.56	51,844.28
32	Gananoque-Smith's Falls	47.9		4,265.09	4,265.09
33	Marmora-Trenton-Kingston	101.3	496.54	61,591.70	62,088.24
34	Lancaster-Hawkesbury	38.1	12,230.52	49,254.48	61,485.00
35	Newcastle-Huntsville	144.2	7,348.22	136,084.00	143,432.22
36	Lindsay-Burleigh Falls	47.5	7.64	33,150.85	33,158.49
37	Belleville-Actinolite	29.3	71,234.02	72,138.64	143,372.66
38	Kingston-Sharbot Lake	47.1	353.97	44,408.94	44,762.91
39	Windsor-Belle River	21.5	780.12	4,109.61	4,889.73
40	Sarnia-Chatham	50.1	4,835.20	76,170.85	81,006.05
41	Picton-Golden Lake	140.6	4,388.54	132,123.54	136,512.08

APPENDIX No. 2
GROSS EXPENDITURE BY ROADS
April 1st, 1945, to March 31st, 1946

Highway No.	Location	Mileage	Construction	Maintenance	Total
42	Brockville-Westport	43.	797.18	96,331.04	97,128.22
43	Alexandria-Winchester	40.4	1,649.35	26,121.43	27,770.78
44	Almonte-Carp	14.	1,582.31	18,394.11	19,976.42
45	Cobourg-Norwood	33.	1,902.00	34,692.81	36,594.81
46	Highway No. 7-Coboconk	34.	234.34	30,213.19	30,447.53
47	Highway No. 12-Stouffville	19.	105.65	31,102.21	31,207.86
48	Port Bolster-Beaverton	6.	....	11,645.51	11,645.51
49	Kleinburg Junction-Highway No. 50	3.35	....	3,399.78	3,399.78
50	Highway No. 7-Highway No. 9 via Bolton	18.	....	22,823.92	22,823.92
51	Highway No. 24-Highway No. 10, Caledon	2.5	440.53	2,874.22	3,314.75
52	Wentworth County Line-Highway No. 2	18.5	....	11,091.92	11,091.92
53	Woodstock-Highway No. 20	53.7	998.34	35,844.48	36,842.82
54	Cainsville-Cayuga	27.	2,801.08	40,463.14	43,264.22
55	Highway No. 53-Hamilton	4.	....	2,972.04	2,972.04
56	Junction Highway Nos. 53 and 20, Canfield	15.5	21,307.08	104,682.70	125,989.78
57	Bismark-Highway No. 3A	9.	625.87	8,213.97	8,839.84
58	Welland-Humberstone	6.5	469.40	57,058.39	57,527.79
59	Woodstock-Delhi	26.5	1,714.59	46,784.10	48,498.69
60	Huntsville-Lake Dore	133.7	3,941.53	118,664.35	122,605.88
61	Fort William-United States Boundary	40.	6,380.41	53,894.53	60,274.94
62	Madoc-Pembroke	135.	8,794.35	182,775.97	191,570.32
63	North Bay-Temiskaming	41.	1,355.80	37,132.26	38,488.06
64	Sturgeon Falls-Martin River	34.6	1,985.40	23,013.61	24,999.01
65	New Liskeard-Matachewan	66.7	6.08	50,938.34	50,944.42
66	Winston-Quebec Boundary	33.7	66,320.60	121,000.94	187,321.54
67	Iroquois Falls-Timmins	43.6	89.46	85,522.39	85,611.85
68	McKerrow-Little Current	38.	58,317.52	63,784.47	122,101.99
69	Atherley-Britt	112.	3,365.15	107,369.45	110,734.60
70	Kenora-Fort Frances	143.	1,704.68	119,372.30	121,076.98
70A	Berwick Junction-Highway No. 70	14.	....	4,399.97	4,399.97
71	Fort Frances-Rainy River	60.	1,132.88	61,650.78	62,783.66
72	Dinorwic-Sioux Lookout-Hudson	52.5	12.20	40,881.74	40,893.94
73	Port Bruce-Dorchester Road	23.	169.51	22,571.62	22,741.13
74	New Sarum-Nilestown	14.	727.69	9,763.26	10,490.95
75	Wallacetown-Dutton	2.5	....	1,186.69	1,186.69
76	Eagle-West Lorne	3.5	69.49	4,658.05	4,727.54
77	New Glasgow-Rodney	4.	5.58	1,977.85	1,983.43
78	Wallaceburg-Dresden	10.5	....	3,864.28	3,864.28
79	Highway No. 2-Watford	25.5	....	22,989.01	22,989.01
80	Highway No. 2-Alvinston	13.	....	13,250.26	13,250.26
81	Delaware-Grand Bend	44.	420.60	38,092.96	38,513.56
82	Highway No. 7-Port Franks	7.	3,034.14	74,814.55	77,848.69
83	Highway No. 21-Highway No. 23 via Dashwood	24.	....	30,060.88	30,060.88
84	St. Joseph-Hensall	10.5	....	11,489.90	11,489.90
85	Kitchener-Elmira	12.	....	4,876.39	4,876.39
86	Amberley-Highway No. 7	79.	2,869.49	96,267.02	99,136.51
87	Bluevale-Harriston	19.5	1,885.14	14,645.63	16,530.77
88	Bondhead-Bradford	6.	....	6,768.53	6,768.53
89	Primrose-Cookstown	23.5	195.91	37,525.34	37,721.25
90	Angus-Allendale	11.	204.09	19,679.75	19,883.84
91	Duntroon-Stayner	5.2	114.40	7,331.33	7,445.73
92	Elmvale-Wasaga Beach	9.	....	4,014.14	4,014.14
93	Crown Hill-Waverley	17.5	....	13,323.34	13,323.34

APPENDIX No. 2

GROSS EXPENDITURE BY ROADS

April 1st, 1945, to March 31st, 1946

Highway No.	Location	Mileage	Construction	Maintenance	Total
94	Callander-Highway No. 17	6.5		3,287.41	3,287.41
95	Wolfe Island North and South	7.		5,418.09	5,418.09
96	Wolfe Island East and West	20.		10,782.55	10,782.55
97	Hickson-Freelton	44.5	1,500.63	28,403.03	29,903.66
98	Windsor-Tilbury	34.5	540.85	13,980.43	14,521.28
98A	Six Corners, Highway No. 98-Maidstone, Highway No. 3	1.1		545.64	545.64
99	Dundas-Junction Highway No. 58 and No. 24	16.5		22,272.46	22,272.46
100	Thamesford-Highway No. 7	15.	1,786.12	17,642.97	19,429.09
101	Highway No. 11 at Matheson-No. 67 West of Hoyle			23,489.01	23,489.01
	Queen Elizabeth Way		30,859.09	475,919.21	506,778.30
	Burlington Beach Cut-off		231.69	4,133.04	4,367.73
	Ottawa By-pass		1,749.43		1,749.43
	Proposed Four-Lane Highway North of Kingston		Cr. 1,055.54		Cr. 1,055.54
	Howe Island Ferry Road		3,937.52		3,937.52
	St. Lawrence River Road		74.60	52,263.83	52,338.43
	Four-Lane Highway Toronto-Oshawa East		45,706.82	72,430.35	118,137.17
	Proposed Highway Toronto-Barrie		89,005.24		89,005.24
	Waubaushene-Port Severn		478.27	4,706.94	5,185.21
	Wolfe Island Ferry		5,071.15		5,071.15
	Malton Airport Road		15.04		15.04
	St. Thomas Entrance			338.40	338.40
	Pelee Island			3,167.22	3,167.22
	Middle Road, Tilbury-Blenheim			47,886.08	47,886.08
	Lanark County Road 4C			1,040.00	1,040.00
	Chaffey's Locks Road			233.91	233.91
	Queen Street-Lake Shore Road-Brown's Line			9,528.87	9,528.87
	Dundas Diversion			7,146.68	7,146.68
	Miscellaneous Surveys (Controlled Access Highways, etc.)		9,674.79		9,674.79
	TOTAL KING'S HIGHWAYS,	ETC.	$848,911.66	$9,975,798.35	$10,824,710.01
	Brought Forward		848,911.66	9,975,798.35	10,824,710.01
	Total Development Roads		96,105.39	1,556,748.93	1,652,854.32
	Total Mining Roads		95,870.20	11,957.52	107,827.72
	Total Connecting Links		2,227.45	38,821.00	41,048.45
	Total Unincorporated Township Roads		4,913.29	256,966.80	261,880.09
	Stock (Materials, etc.)*			2,716.78	2,716.78
	Lands and Buildings		52,148.83	90,596.81	142,745.64
	Weigh Scales			9,781.58	9,781.58
	Road Equipment, etc			518,235.82	518,235.82
	Division Offices Expense and Engineering			454,393.71	454,393.71
	Net General Expense, etc		29,568.53	87,650.09	117,218.62
			$1,129,745.35	$13,003,667.39	$14,133,412.74

* Inventories, March 31st, 1946	$	839,295.45
Inventories, March 31st, 1945		836,578.67
Increase	$	2,716.78

APPENDIX No. 3

SCHEDULE OF ASSUMPTIONS AND REVERSIONS OF SECTIONS OF THE KING'S HIGHWAY SYSTEM FOR THE FISCAL YEAR ENDING MARCH 31st, 1946.

Assumptions

District or County	Location of Road	Date Assumed	Miles
Rainy River	Emo Village	Dec. 5, 1945	0.40
Sudbury	McKerrow South	Nov. 14, 1945	1.60

Assumed by Land Plan

District or County	Location of Road	Date Assumed	Miles
Algoma	Bruce Mines W.		1.10
Algoma	Macdonald Township (Garden River, I.R.)		3.53
Cochrane	Highway No. 11 (Revised Mileage)		2.90
Frontenac	Oso Township		0.05
Frontenac	Olden and Oso Townships		0.20
Frontenac	Olden Township		0.64
Frontenac	Hinchinbrooke Township		1.35
Frontenac	Hinchinbrooke Township		0.60
Frontenac	Hinchinbrooke Township		1.10
Frontenac	Pittsburgh Township		0.43
Frontenac	Portland Township		0.11
Frontenac	Portland, Hinchinbrooke Townships		1.67
Kenora	Highways No. 17, 70, 72 (Revised Mileage)		2.40
Lennox and Addington	Fredericksburg Township		0.34
Leeds	Elizabethtown Township		0.52
Manitoulin	Highway No. 68 (Revised Mileage)		1.60
Rainy River	Crozier Township		1.45
Rainy River	Devlin Township		1.45
Rainy River	Emo		0.30
Rainy River	Potts Township		2.70
Sudbury	Hallam, Shakespeare and Baldwin Townships		9.75
Temiskaming	Englehart N.W.		2.35
			38.54

Reversions

District or County	Location of Road	Date Reverted	Miles
Algoma	Bruce Mines W.	Feb. 17, 1946	1.30
Algoma	Macdonald Township (Garden River, I.R.).	Feb. 17, 1946	3.70
Frontenac	Oso Township	Oct. 8, 1945	0.06
Frontenac	Olden and Oso Townships	Oct. 12, 1945	0.27
Frontenac	Olden Township	Oct. 8, 1945	0.72
Frontenac	Hinchinbrooke Township	Oct. 8, 1945	1.45
Frontenac	Hinchinbrooke Township	Oct. 8, 1945	0.70
Frontenac	Hinchinbrooke Township	Oct. 8, 1945	1.20
Frontenac	Pittsburgh Township	Oct. 8, 1945	0.47
Frontenac	Portland Township	Oct. 8, 1945	0.15
Frontenac	Portland and Hinchinbrooke Township	Oct. 8, 1945	1.74
Lennox and Addington	Fredericksburg Township	Oct. 9, 1945	0.36
Leeds	Elizabethtown Township	Oct. 8, 1945	0.53
Muskoka	Gravenhurst Town	Mar. 18, 1946	1.30
Peterborough	Peterborough City	May 21, 1945	0.55
Peterborough	Peterborough City	May 21, 1945	1.65
Peterborough	Peterborough City	May 21, 1945	0.85
Rainy River	Crozier Township	Nov. 13, 1945	2.18
Rainy River	Devlin Township	Nov. 13, 1945	1.95
Rainy River	Emo Township	Nov. 13, 1945	1.06
Rainy River	Potts Township	Nov. 13, 1945	3.05
Sudbury	Hallam, Merrill and Baldwin Townships	Oct. 29, 1945	10.50
Temiskaming	Englehart N.W.	Nov. 5, 1945	3.07
			38.81

APPENDIX

BRIDGES COMPLETED ON THE

Name	Type	Span	Road
Little Firesteel Bridge....	Concrete Rigid Frame....	1 at 40'..........	No. 17, Fort William to English River..........
Little Long Lac Bridge...	Creosoted Timber.......	9 at 14' 6".........	Geraldton to Highway No. 11.....
Milldale Bridge (Otter Ck.)	Concrete Rigid Frame....	1 at 50'..........	No. 59, Woodstock to Delhi........
Moncrief Twp...........	Timber.................	1 at 30', 2 at 14', 2 at 17'..........	Sudbury to Benny.
Pine Creek..............	Timber Pile.............	3 at 15'..........	Hagar to Rutter...
Pitch Creek No. 1........	Creosoted Timber Truss..	1 at 30'..........	Township Road...
Pitch Creek No. 2........	Creosoted Timber Truss..	1 at 30'..........	Township Road...
Secord Twp.............	Timber.................	3 at 13'..........	No. 69, Sudbury to Burwash.......
Slate River..............	Creosoted Timber.......	15', 15', 5', 50', 5', 15'...........	Township Road...
Slate River..............	Creosoted Timber.......	15', 13', 13', 11'...	Township Road...
Slate River..............	Creosoted Timber.......	15', 5', 40', 5', 13'.	Township Road...

No. 4

KING'S HIGHWAYS DURING 1945

Township	Lot	Con.	County or District	Div. No.
Stedman	Not Surveyed		Thunder Bay	19
Ashmore	Not Surveyed		Thunder Bay	19
Norwich S.	7, 8	VIII	Oxford	2
Moncrief	7	V	Sudbury	17
Haddo	12	III	Sudbury	13
O'Connor	8	II–III	Thunder Bay	19
O'Connor	8	II–III	Thunder Bay	19
Secord	2	V	Sudbury	17
Paipoonge	10	II–III	Thunder Bay	19
Blake	10	I–II	Thunder Bay	19
Paipoonge	11, 12	VI	Thunder Bay	19

APPENDIX No. 5

GROWTH OF COUNTY ROAD EXPENDITURES AND PROVINCIAL GRANTS

Year Work was Done	Number of Counties	Approved Expenditure	Government Grants
1903	4	$ 166,149.06	$ 55,383.02
1904	7	291,085.42	97,028.48
1905	6	179,593.62	59,864.53
1906	8	247,102.37	82,367.45
1907	14	383,518.86	127,839.62
1908	15	429,393.57	143,131.16
1909	16	440,374.08	146,791.36
1910	17	553,312.61	184,437.54
1911	19	712,072.52	237,357.50
1912	20	898,631.18	299,543.69
1913	20	847,684.15	282,561.35
1914	20	785,521.93	261,840.61
1915	20	811,540.05	270,513.34
1916	21	955,447.19	327,663.76
1917	30	1,388,341.87	483,621.32
1918	36	2,226,899.70	815,440.01
1919	37	5,714,937.19	2,623,719.24
1920	37	7,956,863.72	3,626,418.08
1921	37	11,078,288.39	5,119,882.26
1922	37	9,162,491.79	4,258,339.83
1923	37	7,403,509.96	3,418,523.07
1924	37	6,861,451.62	3,214,321.50
1925	37	6,608,431.04	3,222,678.10
1926	37	5,838,445.12	2,913,660.96
1927	37	7,424,464.85	3,706,719.88
1928	37	8,784,420.42	4,360,222.86
1929	37	9,212,758.04	4,591,110.16
1930	37	8,929,424.27	4,463,527.11
1931	37	7,265,350.65	3,625,860.66
1932	37	4,214,410.70	2,106,457.18
1933	37	3,058,622.91	1,529,228.37
1934	37	3,391,768.96	1,695,291.35
1935	37	3,107,215.32	1,553,273.39
1936	37	3,438,188.53	1,718,944.63
1937	37	4,062,753.39	2,031,372.49
1938	37	4,686,333.38	2,342,971.65
1939	37	4,775,109.01	2,387,240.73
1940	37	4,496,702.25	2,247,977.06
1941	37	4,805,301.60	2,402,650.75
1942	37	3,221,505.02	1,610,752.54
1943	37	3,951,745.47	1,975,872.73
1944	37	4,675,028.89	2,365,507.20
1945	37	5,692,079.85	2,898,135.97
Totals to Date		$171,134,270.52	$81,886,044.49

APPENDIX No. 6

COUNTY ROAD MILEAGE AND EXPENDITURE

From Inception of County Road Systems to December 31st, 1945, Provincial Subsidies on 1945 Expenditures Being Paid in 1946.

County	Year of Establishment of System	Road Mileages County Roads	County Sub-urban Roads	Total	Total Approved Expenditure to end of 1945	Total Government Grant
Brant	1917	74.5	26.4	100.9	$ 3,118,113.74	$1,550,822.72
Bruce	1917	275.7	....	275.7	4,441,459.38	2,213,196.54
Carleton	1910	138.0	90.0	228.0	8,272,630.04	3,936,389.69
Dufferin	1918	160.5	....	160.5	1,800,290.21	863,762.79
Elgin	1917	230.3	20.0	250.3	3,580,787.87	1,719,693.32
Essex	1916	205.4	41.0	246.4	7,049,355.79	3,469,066.15
Frontenac	1907	142.4	38.2	180.6	2,215,540.31	1,041,761.15
Grey	1918	307.7	32.5	340.2	4,652,173.68	2,307,782.77
Haldimand	1912	155.2	....	155.2	3,607,085.82	1,703,480.10
Halton	1907	141.1	....	141.1	2,988,878.88	1,402,054.83
Hastings	1904	274.1	5.0	279.1	4,161,863.92	1,954,108.12
Huron	1917	375.5	....	375.5	4,050,194.90	1,968,809.88
Kent	1917	270.3	9.7	280.0	6,661,801.95	3,338,559.44
Lambton	1918	210.6	14.5	225.1	3,374,427.19	1,638,216.01
Lanark	1903	224.9	6.0	230.9	3,418,825.41	1,632,288.59
Leeds and Grenville	1910	276.8	12.7	289.5	4,843,252.28	2,279,316.99
Lennox and Addington	1906	152.8	....	152.8	3,129,864.66	1,519,608.04
Lincoln	1904	136.6	12.3	148.9	4,997,815.75	2,239,008.69
Middlesex	1906	422.7	54.1	476.8	5,641,406.49	2,639,572.45
Norfolk	1917	199.8	....	199.8	4,764,248.94	2,296,451.30
Northumberland and Durham	1918	230.7	....	230.7	3,930,843.56	1,937,136.06
Ontario	1918	186.2	16.2	202.4	2,986,047.04	1,460,395.41
Oxford	1904–7	179.3	3.9	183.2	4,030,476.33	1,843,261.72
Peel	1907	121.9	....	121.9	3,323,651.82	1,527,061.88
Perth	1907	150.7	7.5	158.2	2,421,671.93	1,126,142.55
Peterborough	1919	120.9	76.4	197.3	1,833,707.34	892,722.45
Prescott and Russell	1917	303.1	....	303.1	5,452,948.11	2,504,107.36
Prince Edward	1907	176.9	....	176.9	2,710,165.40	1,266,104.88
Renfrew	1918	220.0	....	220.0	3,931,509.46	1,925,185.64
Simcoe	1903	259.4	....	259.4	5,205,685.39	2,449,756.02
Stormont, Dundas and Glengarry	1917	433.3	30.0	463.3	7,162,467.51	3,507,711.63
Victoria	1917	183.2	....	183.2	3,323,956.09	1,651,587.64
Waterloo	1908	154.8	25.2	180.0	5,224,469.54	2,566,066.67
Welland	1912	105.0	16.9	121.9	5,539,968.38	2,592,299.97
Wellington	1903	310.0	23.5	333.5	5,165,346.23	2,456,509.57
Wentworth	1903	99.6	53.0	152.6	5,492,796.10	2,562,711.52
York	1911	71.0	264.2	335.2	16,628,543.08	7,903,333.95
TOTALS		7,680.9	879.2	8,560.1	$171,134,270.52	$81,886,041.49

APPENDIX

SUMMARY OF COUNTY

Name of County	Roads		Bridges		Bridges and Culverts special rate	
	Construction	Maintenance	Construction	Maintenance	Construction	Maintenance
Brant	$ 19,772.29	$ 58,948.08		$ 3,142.93		
Bruce	15,725.34	77,015.29		47.17	8,884.42	1,066.02
Carleton	34,732.53	75,519.14		1,393.13	16,380.50	
Dufferin	36,405.90	29,588.18		14.00	868.01	
Elgin	40,434.42	95,517.61		4,298.02	6,159.18	551.11
Essex	60,060.75	76,528.51		89.70		
Frontenac	33,390.64	30,920.40		568.45		
Grey	63,894.30	78,402.06			7,783.78	
Haldimand	155,949.24	61,050.93		132.77	5,110.42	
Halton	40,910.80	53,504.22	347.75	662.61	14,243.30	
Hastings	21,212.38	66,044.73		800.70	1,266.80	
Huron	44,591.65	58,545.73		1,499.78	10,007.56	
Kent	114,145.01	152,640.64		1,458.78	43,742.10	
Lambton	28,282.86	59,139.43		403.36		
Lanark	33,457.96	44,523 82		1,291.22	1,320.37	1,838.09
Leeds and Grenville	110,495.86	34,812.91	1,815.47	325.93	1,183.55	1,671.84
Lennox and Addington	30,603.50	64,239.12		712.78		
Lincoln	40,868.67	61,714.49		453.63	13,150.58	
Middlesex	61,434.99	110,920.01		4,662.32	827.04	
Norfolk	43,913.66	87,472.89		1,103.23		
Northumberland and Durham	44,951.60	50,747.70		210.77		
Ontario	38,777.98	69,257.97		928.92	4,023.72	
Oxford	28,665.82	61,743.96	1,083.00	472.39	2,887.25	
Peel	28,990.60	60,853.08	924.46	390.39	13,415.66	
Perth	18,772.29	54,007.07		919.72		1,065.90
Peterborough	28,004.58	53,656.07		1,518.06		2,036.65
Prescott and Russell	59,165.51	124,462.70		1,421.58	14,778.12	
Prince Edward	20,346.86	49,536.63				
Renfrew	19,761.07	90,573.44		665.54	6,851.01	
Simcoe	30,476.45	102,294.40	754.47	4,488.00	7,393.57	1,709.08
Stormont, Dundas and Glengarry	40,162.75	99,332.45		5,154.80		
Victoria	48,146.24	31,143.21		259.44		
Waterloo	35,587.97	99,066.26		638.77		
Welland	8,621.63	53,512.96		829.36	1,354.22	
Wellington	93,108.69	104,965.14		1,009.52	1,743.25	
Wentworth	50,711.70	68,384.16		754.29	3,797.35	
York	126,901.00	139,541.80	262.00	3,783.01	3,500.00	7,773.75
Totals	$ 1,751,435.49	$ 2,690,127.19	$ 5,187.15	$ 46,505.07	$ 190,671.76	$ 17,712.44

No. 7

ROAD EXPENDITURES — 1945

Winter Control (Maintenance)	Approved Expenditure			Government Subsidy 50%		
	Construction	Maintenance	Total	Construction	Maintenance	Total
$ 12,213.55	$ 19,772.29	$ 74,304.56	$ 94,076.85	$ 9,886.15	$ 37,152.28	$ 47,038.43
19,414.48	24,609.76	97,542.96	122,152.72	14,525.98	49,037.99	63,563.97
34,357.45	51,113.03	111,269.72	162,382.75	29,651.64	55,634.86	85,286.50
12,662.58	37,273.91	42,264.76	79,538.67	18,853.95	21,132.38	39,986.33
12,843.52	46,593.60	113,210.26	159,803.86	24,836.59	56,742.91	81,579.50
12,047.27	60,060.75	88,665.48	148,726.23	30,030.38	44,332.74	74,363.12
15,248.63	33,390.64	46,737.48	80,128.12	16,695.32	23,368.74	40,064.06
27,064.00	71,678.08	105,466.06	177,144.14	37,784.99	52,733.03	90,518.02
16,768.78	161,059.66	77,952.48	239,012.14	81,807.43	38,976.24	120,783.67
19,940.00	55,501.85	74,106.83	129,608.68	31,311.74	37,053.42	68,365.16
20,494.25	22,479.18	87,339.68	109,818.86	11,556.29	43,669.84	55,226.13
36,534.82	54,599.21	96,580.33	151,179.54	29,801.49	48,290.17	78,091.66
18,917.99	157,887.11	173,017.41	330,904.52	89,879.08	86,508.71	176,387.79
11,921.13	28,282.86	71,463.92	99,746.78	14,141.43	35,731.96	49,873.39
19,125.81	34,778.33	66,778.94	101,557.27	17,719.26	33,848.99	51,568.25
26,027.43	113,494.88	62,838.11	176,332.99	57,043.33	31,837.02	88,880.35
20,464.86	30,603.50	85,416.76	116,020.26	15,301.75	42,708.38	58,010.13
19,039.02	54,019.25	81,207.14	135,226.39	30,297.27	40,603.57	70,900.84
29,699.57	62,262.03	145,281.90	207,543.93	31,337.78	72,640.95	103,978.73
13,820.55	43,913.66	102,396.67	146,310.33	21,956.83	51,198.34	73,155.17
27,604.93	44,951.60	78,563.40	123,515.00	22,475.80	39,281.70	61,757.50
31,012.83	42,801.70	101,199.78	144,001.48	22,406.78	50,599.89	73,006.67
13,937.55	32,636.07	76,153.90	108,789.97	17,039.85	38,076.95	55,116.80
21,119.03	43,330.72	82,362.50	125,693.22	25,019.27	41,181.25	66,200.52
15,631.38	18,772.29	71,624.07	90,396.36	9,386.14	36,078.52	45,464.66
10,957.64	28,004.58	68,168.42	96,173.00	14,002.29	34,593.37	48,595.66
44,584.23	73,943.63	170,468.51	244,412.14	40,666.35	85,234.25	125,900.60
19,818.81	20,346.86	69,355.44	89,702.30	10,173.43	34,677.72	44,851.15
20,319.63	26,612.08	111,558.61	138,170.69	15,018.79	55,779.31	70,798.10
32,424.04	38,624.49	140,915.52	179,540.01	21,160.64	70,885.03	92,045.67
83,331.43	40,162.75	187,818.68	227,981.43	20,081.37	93,909.34	113,990.71
15,723.26	48,146.24	47,125.91	95,272.15	24,073.12	23,562.95	47,636.07
22,107.16	35,587.97	121,812.19	157,400.16	17,793.98	60,906.10	78,700.08
21,705.01	9,975.85	76,047.33	86,023.18	5,326.47	38,023.67	43,350.14
40,913.35	94,851.94	146,888.01	241,739.95	47,861.78	73,444.00	121,305.78
47,422.07	54,509.05	116,560.52	171,069.57	28,203.86	58,280.26	86,484.12
123,222.65	130,663.00	274,321.21	404,984.21	66,206.50	139,104.04	205,310.54
990,440.75	1,947,294.40	3,744,785.45	5,692,079.85	1,021,315.10	1,876,820.87	2,898,135.97

APPENDIX No. 8

SUMMARY OF ROAD EXPENDITURES IN ORGANIZED TOWNSHIPS

Approved Expenditure and Government Subsidy on Township, Improvement District, Indian Reserve and Provincial Park Roads Under the Provisions of The Highway Improvement Act, Part IV.

Year	No. of Twps.	Approved Expenditure			Government Subsidy		
		Construction	Maintenance	Total	Construction	Maintenance	Total
1920 to 1934	172 to 338	$23,718,523.99	$34,676.016.07	$58,394,540.06	$ 7,615,854.36	$11,127,216.53	$18,743,070.89
1935	339	830,871.14	2,114,553.23	2,945,424.37	347,937.81	885,868.67	1,233,806.48
1936	343	713,523.32	2,275,094.06	2,988,617.38	299,877.21	951,755.22	1,251,632.43
1937	344	1,236,900.18	2,620,618.43	3,857,518.61	625,524.80	1,317,820.18	1,943,344.98
1938	559	1,589,096.89	3,237,808.11	4,826,905.00	832,449.30	1,721,388.67	2,553,837.97
1939	565	1,824,526.20	3,568,455.39	5,392,981.59	977,214.55	1,888,537.57	2,865,752.12
1940	563	1,006,122.02	3,499,173.61	4,505,295.63	544,894.50	1,866,170.40	2,411,064.90
1941	566	1,060,139.17	4,392,147.57	5,452,286.74	573,164.34	2,344,652.10	2,917,816.44
1942	564	19,564.88	3,678,736.47	3,698,301.35	10,286.25	1,968,082.06	1,978,368.31
1943	564	209,424.76	5,303,565.76	5,512,990.52	85,504.23	2,844,003.92	2,929,508.15
1944	564	1,286,828.69	4,976,971.21	6,263,799.90	730,183.54	2,670,520.75	3,400,704.29
1945	566	2,109,532.25	5,587,001.62	7,696,533.87	1,203,589.68	2,974,019.15	4,177,608.83
TOTALS........	....	$35,605,053.49	$75,930,141.53	$111,535,195.02	$13,846,480.57	$32,560,035.22	$46,406,515.79

NOTE: *In addition to the 566 townships listed for the last year, 6 Improvement Districts, 22 Indian Reserves and 2 Provincial Parks are represented in the above expenditure for 1945.*

APPENDIX

MILEAGE OF ROAD SURFACES

Municipality	COUNTY ROADS				
	Earth	Gravel or Stone	Bitu-minous Surfaces	Bitu-minous Pavement	Cement Concrete
Brant	2.3	59.3	31.8	6.5	1.0
Bruce	....	214.2	59.7	0.5	1.3
Carleton	1.3	92.6	75.8	58.3	....
Dufferin	....	159.4	....	....	1.1
Elgin	....	226.5	23.6	....	0.2
Essex	....	161.0	34.6	5.1	45.7
Frontenac	....	119.1	61.5	....	....
Grey	....	297.1	42.4	....	0.7
Haldimand	4.2	97.7	43.6	5.8	3.9
Halton	....	100.9	18.9	....	21.3
Hastings	....	240.4	20.1	16.3	2.3
Huron	....	307.2	67.8	....	0.5
Kent	....	158.5	95.1	2.7	23.7
Lambton	....	186.0	36.5	....	2.6
Lanark	8.8	164.2	41.5	16.4	....
Leeds and Grenville	36.3	110.0	77.3	62.2	3.7
Lennox and Addington	....	92.8	30.0	30.0	....
Lincoln	....	10.4	123.0	2.9	12.6
Middlesex	....	421.9	14.4	....	40.5
Norfolk	3.8	40.2	154.6	....	1.2
Northumberland and Durham	....	192.5	2.5	35.7	....
Ontario	....	155.4	42.2	....	4.8
Oxford	....	142.8	40.4	....	....
Peel	....	99.1	6.8	10.6	5.4
Perth	....	141.5	16.7	....	....
Peterborough	....	178.7	18.6	....	....
Prescott and Russell	27.2	178.5	79.9	17.5	....
Prince Edward	....	93.9	65.5	8.9	8.6
Renfrew	17.3	158.8	43.9	....	....
Simcoe	....	250.3	8.9	0.2	....
Stormont, Dundas and Glengarry	....	196.6	265.5	....	1.2
Victoria	....	161.8	18.4	3.0	....
Waterloo	....	115.3	36.6	....	28.1
Welland	....	6.2	83.0	22.4	10.3
Wellington	....	294.6	26.0	....	12.9
Wentworth	....	65.0	80.3	3.9	3.4
York	12.6	81.7	148.3	73.8	18.8
Total County Area	113.8	5772.1	2035.7	382.7	255.8
Northern Organized Townships	....	....	....	....	....
Unorganized—Township and Mining Roads	....	....	....	....	....
GRAND TOTALS	113.8	5772.1	2035.7	382.7	255.8

No. 9

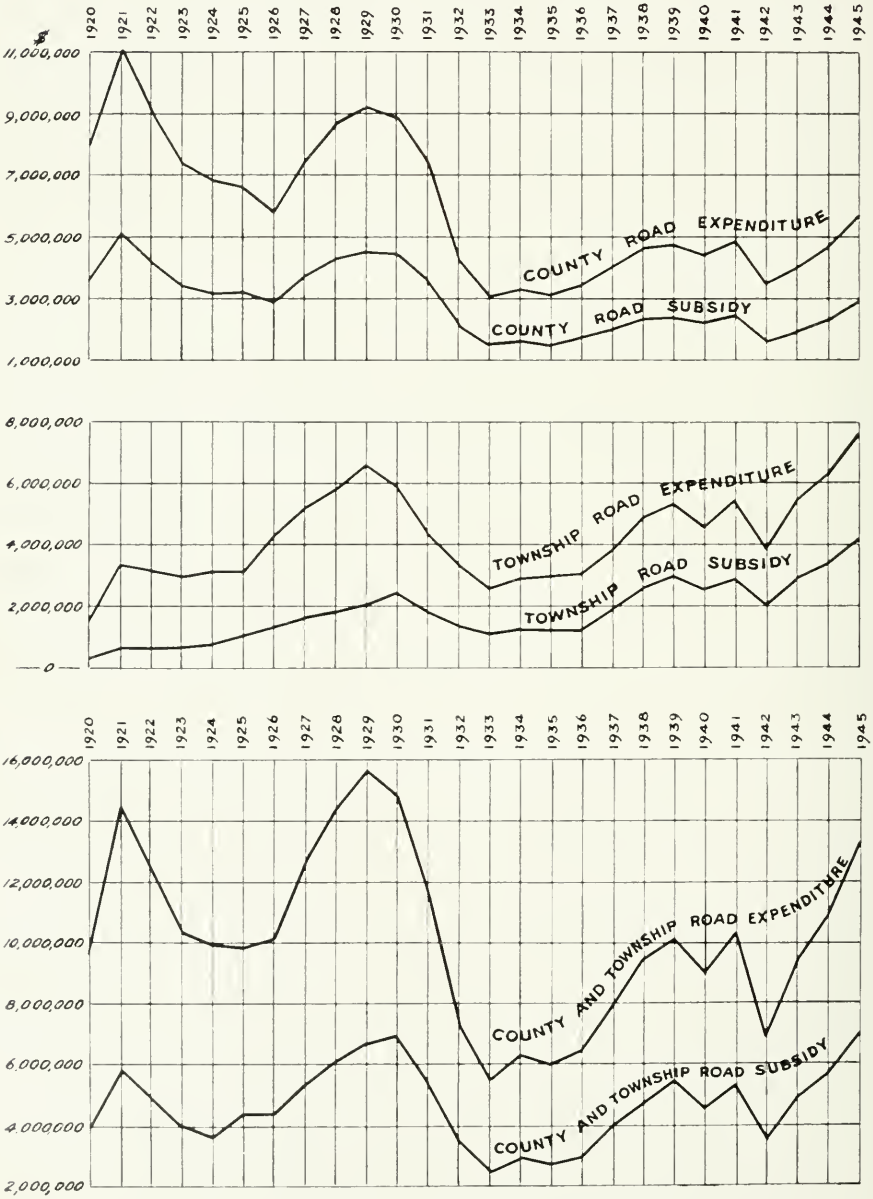
AT THE END OF 1945

	ORGANIZED TOWNSHIP ROADS					
Total	Earth	Gravel or Stone	Bituminous Surfaces	Bituminous Pavement	Cement Concrete	Total
100.9	95.3	452.4	2.8	....	....	550.5
275.7	228.7	1403.0	....	....	....	1631.7
228.0	324.6	744.0	7.6	0.6	....	1076.8
160.5	149.0	613.0	....	....	....	762.0
250.3	58.0	821.1	0.3	....	....	879.4
246.4	71.5	818.7	....	....	35.3	925.5
180.6	446.6	493.2	1.0	....	....	940.8
340.2	410.0	1663.4	....	....	....	2073.4
155.2	136.9	455.5	9.7	....	....	602.1
141.1	34.8	397.4	....	....	1.2	433.4
279.1	372.0	1126.3	....	1.0	....	1499.3
375.5	208.0	1349.4	1.3	....	....	1558.7
280.0	141.1	1181.8	3.0	....	....	1325.9
225.1	231.6	1202.6	2.3	....	....	1436.5
230.9	560.5	425.0	....	....	....	985.5
289.5	534.5	806.3	16.2	13.5	....	1370.5
152.8	277.7	377.9	0.5	....	....	656.1
148.9	246.1	408.2	9.8	....	3.6	667.7
476.8	150.5	1371.2	....	....	0.2	1521.9
199.8	407.1	516.6	5.9	....	....	929.6
230.7	916.6	1333.0	....	....	....	2249.6
202.4	246.3	932.4	0.2	....	....	1178.9
183.2	17.0	1035.3	5.3	....	....	1057.6
121.9	88.0	515.1	....	....	....	603.1
158.2	70.8	997.3	0.2	....	....	1068.3
197.3	304.5	618.8	1.4	....	....	924.7
303.1	623.1	320.4	....	....	....	943.5
176.9	56.4	314.2	....	....	....	370.6
220.0	1009.8	671.5	....	....	....	1681.3
259.4	492.3	1614.4	....	....	....	2106.7
463.3	512.3	807.2	5.5	....	5.1	1330.1
183.2	167.3	763.7	....	....	....	931.0
180.0	52.5	483.8	....	....	0.2	536.5
121.9	427.5	392.9	111.0	9.2	2.1	942.7
333.5	546.9	768.4	....	....	0.4	1315.7
152.6	98.1	465.2	0.9	....	....	564.2
335.2	514.1	1013.8	52.5	88.5	14.1	1683.0
8560.1	11228.0	29674.4	237.4	112.8	62.2	41314.8
....	1547.7	4988.3	69.2	10.3	....	6615.5
....	2978.0	3008.6	....	....	....	5986.6
8560.1	15753.7	37671.3	306.6	123.1	62.2	53916.9

APPENDIX No. 10

MUNICIPAL ROADS BRANCH

Graphs Showing Rise and Fall in Total Approved Expenditures by Organized Municipalities and in Government Subsidies by Calendar Work-Years from 1920 to 1945 Inclusive



For explanatory comments see "Report on the Work of the Municipal Roads Branch" in the front section of this Annual Report.

Report of the Motor Vehicles Branch, 1945

To The Honourable George H. Doucett,
Minister of Highways.

Sir:

I have the honour to submit herewith a report of the activities of the Motor Vehicles Branch for the year 1945.

This report includes:

(1) Figures relating to motor vehicle permits and drivers' licenses issued during the license year ending March 31st, 1946;

(2) A statement showing the revenue derived from all sources during the fiscal year ending March 31st, 1946; and

(3) Reports pertaining to the work of the Accident and Statistical Division, Financial Responsibility Division, and the Public Vehicle Division for the year 1945.

The summarized information contained in the following preamble is dealt with in more detail in the pages of this report:

Motor Vehicle Registrations

There were 662,719 motor vehicles registered during the year as compared with 675,057 for 1944, and 731,194 for the peak year, 1941. The 1945 total was 1.8 per cent. below the total for the previous year, and 10.35 per cent. less than the 1941 total.

Drivers' Licenses

Chauffeurs' and operators' licenses issued during the year totalled 971,852, representing an increase of 66,202 (or 7.3%) from the 1944 total, and a decrease of 1.5 per cent. from the peak total (986,773) for 1941. As compared with the 7.3 per cent. increase in the number of drivers' licenses issued, there was a 15.3 per cent. increase in chauffeur registrations, and an increase of 3.5 per cent. in the number of operators' licenses. There were 81,928 temporary instruction permits issued representing an advance of 17.1 per cent. from the 1944 total.

Revenue

The net revenue collected during the fiscal year ending March 31, 1946, amounted to $9,774,584.92 as compared with $9,445,499.18 for the previous year, representing an increase in revenue of $329,085.74 or 3.5 per cent.

Motor Vehicle Accidents

During the calendar year 1945 there were 13,458 reports of accidents received and recorded, involving the loss of 598 lives, injury to 9,804 persons and a property damage loss of $2,249,271. Corresponding figures for 1944 were: 11,004 accidents, 498 deaths, 8,373 injuries and $1,769,663 property damage loss.

Financial Responsibility Division

During 1945 there were 4,191 suspensions applied, requiring the filing of proof of financial responsibility.

There were 25,898 convictions (involving the operation of motor vehicles) reported during 1945 as compared with 23,827 for the previous year — representing an increase of 8.7 per cent. from the 1944 total.

Public Vehicle Division

There were 8,524 Public Commercial Vehicles licensed during the year — an increase of 327 or 4.0 per cent. from the previous year's total (8,197).

There were 1,750 Public Vehicles licensed as contrasted with 1,610 — representing an advance of 140 or 8.7 per cent.

General

The Motor Vehicles Branch having such widely diversified activities, a brief outline of these may be of general interest.

Under the Highway Traffic Act all motor vehicles are registered and drivers licensed by the Branch either directly through the head office in Toronto, or through the offices of agents throughout the Province. Each day reports of permits and licenses issued by 205 representatives throughout Ontario are received at the Branch.

A prerequisite to the issuance of a driver's license is the ability to pass a driving test given by examiners appointed for this purpose. Five examiners are attached to the head-office staff and 223 other examiners are located throughout the Province, each restricted to the examination of persons residing in the immediate vicinity. This is an important part of the work of the Branch and unquestionably has done much to add to the safety of our highways not only by eliminating the unfit but also by providing a means of control through the issuance of licenses. Continued efforts to improve the standards of examination have been made over the years and it is recommended that these efforts be extended in the interests of safe driving.

Since the purpose of the driving examination is to ascertain whether the applicant for a license is capable of driving and does not indicate to what extent the individual will apply his knowledge when on the road, the Motor Vehicles Branch maintains a record or driving history of each motorist. If a driver is involved in a reportable accident, or convicted or warned following an offence relating to the operation of his motor vehicle an entry is made on his driving record. As additions are made, these records are reviewed and appropriate action taken.

Accident repeaters, that is persons involved in two or more accidents, are given particular attention and such persons are required to submit to driving and vision tests or their driving privileges are recalled, depending on the nature and extent of the record. From the use of these record files it has been possible to isolate many cases involving drivers lacking the physical condition, skill or attitude necessary for safe driving.

Some comprehension of the volume of the work of the Branch will be secured when it is known that these records cover the driving history of 750,000 motorists. This total may be compared with the 1945 registration of 662,719 vehicles and 971,852 drivers.

As a means of avoiding wide variations in traffic regulations in the various parts of the Province, which could only lead to confusion and increased difficulty in driving, the by-laws of all municipalities are subject to approval by this Department before becoming operative. This work is handled through the Motor Vehicles Branch and the number of by-laws submitted for approval has been increasing each year.

The work of the Public Vehicle Division involves the licensing and control of bus and public transport vehicles. The activities of this Division have been considerably expanded since, with the removal of restrictions by the Federal Government, the schedule of operations of most Public Vehicle licensees has been altered by increases in the number of scheduled trips and in the number of vehicles operated. The availability of new motor vehicle transport equipment has added to the routine work of this Division since changes or additions in equipment necessitate changes and additions in office records. There has also been a larger than usual number of enquiries and applications relating to bus and truck operations from men who have gained driving experience while in the Services and who are anxious to establish themselves in the motor transport industry.

In addition to the permanent records of drivers and of public vehicle and public commercial vehicle operating licenses, the Branch maintains one of the largest annual files in the public service. A total in excess of 1,500,000 applications for driving licenses and motor vehicle permits are recorded annually and filed by name of driver or owner and by license or permit number.

These various activities of the Branch are carried out by a head office staff of 95, with the assistance of a temporary staff of 40 clerks necessary during the rush period.

To these members of the staff and to the representatives of the Branch throughout the Province, I wish to express my thanks for their valuable aid and co-operation throughout the past year.

Respectfully submitted,

J. P. Bickell,
Registrar of Motor Vehicles.

NUMBER OF PERMITS AND LICENSES ISSUED

The number of drivers licensed and motor vehicles registered during each of the five years, 1941 to 1945, and the percentage change between the 1945 and 1944 totals are shown in the following tables:

CLASS OF LICENSE OR PERMIT	1941	1942	1943	1944	1945	% Change
Passenger car	636,624	611,897	586,036	568,223	555,461	2.2 D
Commercial vehicle	93,754	94,318	96,103	97,869	98,339	4.8 I
Bus	1,268	1,518	1,614	1,743	1,895	8.7 I
Two-purpose vehicle	1,654	1,543	1,447	1,321	1,279	3.2 D
Motorcycle	5,894	6,104	6,415	5,901	5,745	2.6 D
TOTAL	739,194	715,380	691,615	675,057	662,719	1.8 D
Trailer	48,739	48,795	48,426	48,900	53,004	8.4 I
Operators	690,582	664,455	630,680	615,293	637,020	3.5 I
Chauffeurs	296,191	297,428	288,867	290,357	334,832	15.3 I
TOTAL	986,773	961,883	919,547	905,650	971,852	7.3 I
Instruction permits	122,002	76,390	70,112	69,974	81,928	17.1 I
Transfers	179,930	125,964	133,032	115,952	102,410	11.7 D
'In transit' permits	14,511	3,341	581	1,010	2,998	196.8 I
'M' dealers	1,076	794	569	709	708	0.1 D
'MC' dealers	3	2	2	3	4	....

REVENUE OF MOTOR VEHICLES BRANCH
Fiscal Year 1944-1945

PERMITS AND LICENSES:				
Passenger		$ 4,162,069.05*		
Commercial		3,451,476.90*		
Two-purpose		6,275.60*		
Trailers		351,844.94*		
Motorcycles		5,302.60*		
DEALERS:				
Automobiles	$17,018.00			
Motorcycles	18.00			
		17,036.00*		
Operators' and Instruction permits		668,130.10*		
Chauffeurs' licenses		397,192.90*		
Public Vehicles		262,954.76*		
Public Commercial Vehicles		270,104.20		
Miscellaneous		863.62*		
			$ 9,593,250.67*	
FEES:				
'In Transit' permits		2,111.15*		
Duplicate cards		11,784.00*		
Transfers		97,616.90		
Searches and certificates		1,423.33*		
Lists		2,765.41*		
Examinations		14,947.00*		
			$ 130,647.79	
FINES:				
Breach of Highway Traffic Act			50,686.46*	
				$ 9,774,584.92*

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* Indicates increase from previous fiscal year.

NUMBER OF MOTOR VEHICLES REGISTERED IN ONTARIO†

Year	Passenger	Commercial	Two Purpose	Motorcycle	Total
1903	178				178
1904	535				535
1905	553				553
1906	1,176				1,176
1907	1,530				1,530
1908	1,754				1,754
1909	2,452				2,452
1910	4,230				4,230
1911	11,339				11,339
1912	16,268			1,754	18,022
1913	23,700			2,900	26,600
1914	31,724			3,633	35,357
1915	42,346			4,174	46,520
1916	51,589	2,786		4,287	58,662
1917	78,861	4,929		5,180	88,970
1918	101,599	7,529		5,002	114,130
1919	127,860	11,428		5,516	144,804
1920	155,861	16,204		5,496	177,561
1921	181,978	19,554		4,989	206,521
1922	210,333	24,164		4,799	239,296
1923	245,815	28,612		4,325	278,752
1924	271,341	31,488		3,941	306,770
1925	303,736	34,690		3,748	342,174
1926	343,992	39,012		3,345	386,349
1927	386,903	43,442		3,159	433,504
1928	429,426	54,714		3,197	487,337
1929	473,222	55,218	8,226	3,541	540,207
1930	490,906	61,690	5,986	3,924	562,506
1931	489,713	64,256	4,177	4,070	562,216
1932	462,923	61,347	3,239	4,088	531,597
1933	453,314	59,760	2,909	4,370	520,353
1934	470,617	64,436	2,724	4,468	542,245
1935	489,610	67,590	2,370	4,506	564,076
1936	514,211	70,693	*	4,553	589,457
1937	541,802	75,687	1,847	4,582	623,918
1938	580,364	81,642	1,876	5,206	669,088
1939	593,693	82,206	1,893	5,099	682,891
1940	610,576	86,038	1,855	5,403	703,872
1941	636,624	95,022	1,654	5,894	739,194
1942	611,897	95,836	1,543	6,104	715,380
1943	586,036	97,717	1,447	6,415	691,615
1944	568,223	99,612	1,321	5,901	675,057
1945	555,461	100,234	1,279	5,745	662,719

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† Totals do not include trailer permits.

* Included with passenger vehicles.

REPORT OF ACCIDENT RECORDING DIVISION, 1945

As the name implies, the chief function of the Accident Recording Division is the collection, compilation and analysis of statistics relating to motor vehicle accidents as a means of providing information that will be of use in dealing with this problem in an intelligent and effective way.

At the end of 1945, the Division had completed fifteen full years of operation during which period reports of 184,123 accidents had been received involving the loss of 8,881 lives, injury to 154,095 persons and a property damage loss of $24,491,255. The reports of these accidents were filed by approximately 267,000 drivers and the accumulated data have been used in highway and traffic engineering, in educating drivers and the public generally, in law enforcement, and in the directing of preventive legislation. While, in view of the frequently unreliable source of the information, accident statistics fall short of perfection — particularly those relating to the primary causes of accidents — it is nevertheless certain that proper, intelligent use of the data now available by highway and traffic engineers, by the police and educationists would result in a large reduction in accident frequency and, at the same time, greater efficiency in traffic movement.

In 1945, largely due to the rapid increase in vehicle travel which followed the lifting of the restrictions on motor vehicle use, there was an increase in accidents, deaths and injuries. There were 13,458 mishaps reported during the year, in which 598 persons were killed, 9,804 persons injured and a property damage loss of $2,249,271. These figures may be compared with the corresponding totals for 1944 when 498 persons were fatally injured and 8,373 non-fatally injured in 11,004 accidents reported during that year.

(Since the circumstances of the accidents reported in 1945 are shown in some detail in the statistical summary appended to this report, and as a separate study has been prepared no further comment relating to the statistics will be made here.)

An increasing amount of the work of this Division has been devoted in recent years to the records of individual drivers and to the re-examination of drivers who because of age or inexperience or unfavourable records have caused some question of their driving fitness to arise. While the number of drivers who have been unable to meet the requirements in such cases has not been large, the fact that any such have been isolated and removed from the road would seem to justify the continuance of this branch of our work, especially since its purpose is educational and not intended as punishment for faulty behaviour.

In 1942 an arrangement was made with the Department of National Defence to have all cases of epilepsy, coming to the attention of medical officers, reported to the Motor Vehicles Branch. The hazard resulting from the sudden loss of consciousness which is symptomatic of this condition makes epilepsy a vital problem to licensing authorities. It has been our practice to prohibit the operation of motor vehicles by such persons until satisfactory evidence of their fitness to drive has been established.

The question as to what constitutes satisfactory evidence has presented a problem in the past, and led, in 1945, to the establishment of the Drivers' Medical Appeal Board. This Board, which comprises four experienced specialists in neurology, and a representative of the Branch, recommends the action to be taken and its deliberations have undoubtedly resulted in fairer treatment of the individual applicant and, at the same time, there has been shown a proper recognition of the requirements of public safety.

REPORT OF PUBLIC VEHICLE DIVISION, 1944-1945

The administration of provisions of the Commercial Vehicle Act, the Public Commercial Vehicle Regulations, the Public Vehicle Act and the Regulations passed thereunder is the assignment of this Division of the Branch.

There are now licensed in Ontario a total of 3,657 Public Commercial Vehicle Operators, 176 Public Vehicle Operators and 461 School Bus Operators.

The vehicles operated are divided among the various classes of operators as follows:

P. C. V. OPERATOR

251 Class A Operators	3,290 Vehicles
38 " B "	53 "
714 " C "	1,513 "
213 " D "	547 "
656 " E "	834 "
1,650 " F "	1,928 "
135 " H "	359 "
176 Public Vehicle Operators	1,750 Vehicles
461 School Bus Operators	491 Vehicles.

The termination of the war and the return to civilian life of many men from the Services has resulted in an increase in applications for licenses to operate Highway Transport vehicles both buses and trucks. These together with an increasing number of applications for extensions to existing licenses has necessitated the Ontario Municipal Board setting aside as many as four days some months for the public hearings.

The Dominion Government regulations which have, since September, 1942, permitted the transportation of Freight in Bond by highway vehicles were rescinded as of December 31st, 1945.

During the period within which these regulations permitted American trucks to operate through Canada with Bonded Freight, a total of 33,848 vehicle trips were made between the States of New York and Michigan through Ontario.

REPORT OF THE FINANCIAL RESPONSIBILITY DIVISION, 1945

This division of the Motor Vehicles Branch is so named because its chief responsibility is the administration of the provisions of the Highway Traffic Act relating to the Financial Responsibility of motor vehicle drivers and owners. These provisions are contained in Part XIII of the Act and have now been in effect for more than fifteen years, having been enacted in September, 1930.

This part of the Act is commonly referred to as The Financial Responsibility Law in that it requires the filing of proof of financial responsibility by those motor vehicle drivers and owners who by reason of act or omission bring themselves within its provisions. It might almost be referred to as a quasi-compulsory insurance law and in fact it was enacted in preference to a full compulsory insurance law for motorists. It requires the filing of Proof of Financial Responsibility (usually in the form of an insurance policy certificate) by those convicted of the offences named in the Act and those who fail to satisfy judgments secured against them for damages arising out of motor vehicle accidents.

No serious administrative difficulties have been encountered in the enforcement of the financial responsibility provisions of the Act and it would appear that it has to a degree fulfilled its purposes, namely: (1) to penalize those convicted of serious offences with motor vehicles by requiring them to file a certificate of insurance or other proof of financial responsibility or to be barred from the roads; (2) to assure the payment of judgments secured for damages arising out of motor vehicle accidents; and (3) to increase the number of insured vehicles.

Tables appended hereto show details by years of cases dealt with during the fifteen year period, 1930 to 1945, inclusive.

Table I shows the number of suspensions applied as the result of the registration of convictions for the various offences named. A conviction for *speeding, careless driving* or *operating without a driver's license* requires the filing of proof of financial responsibility *only* where the offence resulted in personal injury or property damage. A conviction for any of the other named offences requires the filing of such proof regardless of whether there was injury or damage. Where a suspension is applied for failure to satisfy a judgment, in addition to filing proof of financial responsibility, the judgment must be discharged or arrangements made for settlement in instalments before the driving privileges of the judgment debtor may be re-instated. The cases listed under the heading "Cancellation of Proof of F. R." refer to those where a suspension applied following conviction for one of the offences named was rescinded upon the filing of an insurance certificate or other proof but where such certificate or other proof was later withdrawn. A period of two years not having elapsed since the conviction was registered, suspension was again necessary.

In order to clarify that part of the table wherein it is shown that there have been many more suspensions issued for reckless and dangerous driving than for careless driving it should be stated that the *careless driving* provision in the Highway Traffic Act was first enacted in 1939 and replaced the former *reckless driving* provision which was at that time nullified by Dominion legislation covering the same offence under the Criminal Code.

Table II shows, by years, the number of suspensions which have been rescinded. Opposite each offence is shown the number which were rescinded as a result of the filing of proof of financial responsibility. The number shown opposite "expired" has reference to those cases where proof of financial responsibility was not filed but where this requirement was waived after the expiration of the two-year period.

As the suspensions rescinded in any one year may not have been applied in the same year it is not possible from the appended tables to determine the number for any one year where proof of financial responsibility was filed. It is, however, interesting to note from the total column that the more serious the offence the lesser the number which were rescinded upon the filing of insurance certificates or other proof. For example, of those suspended for the offence of speeding almost 70 per cent. were rescinded upon the filing of proof as contrasted with 30 per cent. for the offense of drunk driving. Of the 69,112 suspensions applied, 32,148 (less than half) have been rescinded upon the filing of proof of financial responsibility. All persons affected by the remainder of the suspensions have been or will be barred from the roads for a period of at least two years. In this connection it should be stated that the waiving of the requirement of filing proof of financial responsibility is discretionary with the Minister after two years and, therefore, the length of time for which any person who brings himself within the provisions of the law is required to file such proof depends upon his operating record. In some cases it is required to be maintained on file indefinitely.

From 1930 to 1941 there was a gradual increase in the number of suspensions applied until the total for 1941 was in excess of 7,000. From 1941 there was a gradual decrease to the present figure for 1945 of 4,191. It is quite apparent that this decrease was due to the decrease in the annual aggregate mileage motor vehicles were operated during the war years. With the lifting of gasoline rationing and other restrictions it is anticipated that there will be a decided increase in the number of suspensions which will be applied during the year 1946.

TABLE

FINANCIAL RESPONSIBILITY

September 1, 1930, to

OFFENCE	1930*	1931	1932	1933	1934	1935	1936
Speeding	6	19	15	37	44	64	84
Racing	4	3	1	1			2
Operating Without Driver's License	323	1199	926	1306†	147	231	212
Careless Driving							
Reckless and Dangerous Driving	339	983	585	1064	1322	1546	1711
Leaving Scene of an Accident	92	186	72	182	175	155	232
Drunk Driving	186	554	324	345	120	532	522
Criminal Negligence	9	34	29	36	32	25	26
Other Offences	41	79	57	69	88	99	95
Judgments		48	66	90	46	73	82
Cancellation of Proof of F. R.	7	212	469	976	690	822	894
TOTAL	1007	3317	2544	4106	2964	3547	3860

* Four months only (Sept. 1 30, to Dec. 31 30).

† H. T. A. amended in 1934 so that suspensions required only where this offence resulted in injury or damage.

†† Sec. 27 H. T. A. (Careless Driving) became effective July 1 39. Suspensions applied for this offence, 1012 for 1939 and 2494 for 1940, included under the classification "Reckless Driving."

No. I

SUSPENSIONS APPLIED, BY YEARS

December 31, 1945

1937	1938	1939	1940	1941	1942	1943	1944	1945	TOTAL
77	76	34	21	23	15	10	18	7	550
....	5	.		2		2	5	2	27
271	247	166	178	264	182	150	156	170	6128
.....	...	††	††	3049	2445	1638	1674	1776	10582
2191	2533	2560††	3203††	743	660	474	450	438	20802
264	361	317	371	193	350	307	280	312	1149
826	1089	881	1013	1073	874	674	608	701	10622
54	29	11	3	3	....	2	1	1	298
98	150	178	125	153	222	218	201	153	2026
111	106	150	158	137	108	89	73	73	1410
1015	1050	911	1022	1066	1202	980	644	558	12518
4907	5646	5211	6094	7006	6058	4544	4110	4191	69112

TABLE

FINANCIAL RESPONSIBILITY

September 1, 1930,

OFFENCE	1930*	1931	1932	1933	1934	1935	1936
Speeding	3	10	14	29	36	42	55
Racing	..	3	4	2	.....	.....	2
Operating Without Driver's License	38	336	413	509	2531	99	95
Careless Driving		.		....	.....	.....	.....
Reckless and Dangerous Driving	83	571	554	659	823	950	988
Leaving Scene of an Accident	18	107	101	125	107	103	116
Drunk Driving	10	195	184	149	186	183	165
Criminal Negligence	3	12	15	13	14	18	7
Other Offences	3	16	16	19	21	35	27
Judgments	.....	2	14	26	22	20	35
Cancellation of Proof of F. R.	3	100	405	518	523	496	447
Expired***	..	....	....	1	108	365	480
TOTAL	161	1352	1720	2050	4371	2311	2417

* Four months only (Sept. 1 30, to Dec. 31 30).

** Sec. 27 H. T. A. (Careless Driving) became effective July 1 39. Rescinded suspensions applied under this section included under the classification "Reckless Driving" for 1939 and 1940.

*** Suspensions rescinded without proof of Financial Responsibility being filed but where this requirement was waived because period had expired.

No. II

SUSPENSIONS RESCINDED, BY YEARS

to December 31, 1945

1937	1938	1939	1940	1941	1942	1943	1944	1945	Total
63	51	31	11	12	9	4	9	3	382
....	1	2	....	2	....	....	1	3	20
84	52	40	48	52	38	32	35	34	4436
....	....	**	**	1240	1294	920	967	925	5346
1124	1184	1345	1641	638	242	192	147	135	11276
138	141	165	164	195	137	132	124	128	2001
187	193	219	260	252	205	182	172	164	2906
19	14	9	3	3	......	1	...	1	132
20	10	22	5	12	13	7	23	14	263
30	36	54	51	65	31	27	22	20	455
409	371	401	323	267	205	202	129	132	4931
485	649	739	805	1246	1108	1206	1988	1829	11009
2559	2702	3027	3311	3984	3282	2905	3617	3388	43157

DURING YEAR, 1945.

NUMBER OF ACCIDENTS			
Total	Fatal	Personal Injury	Property Damage Only
9768	411	5314	4043
827	38	377	412
87	3	36	48
2176	76	1107	993
600	19	251	330
13458	547	7085	5826

NUMBER OF ACCIDENTS			
Total	Fatal	Personal Injury	Property Damage Only
7487	278	4042	3167
512	17	249	246
5454	252	2791	2411
5		3	2
13458	547	7085	5826

EDESTRIAN	No. Accidents	
	Fatal	Non-Fatal
intersections:		
signal	2	132
net signal	12	131
ignal	46	600
onally	3	47
intersections	59	819
ting on or off street	1	78
zone	1	10
other vehicle	1	34
in street	21	184
ay	6	23
on vehicle	5	17
ay	40	106
hind parked vehicle	22	230
	50	215
	6	62
	11	108
	10	54
c	14	113
	7	123
	233	2290
	275	2688

FICATION ICTIMS	Killed	Injured
	125	1967
	133	3917
	283	2883
ons in horse- etc.)	4	87
	40	682
rs	9	189
agers	4	79
	598	9804

14. NATURE OF INJURIES

	Fatal	Non-Fatal
1. Fractured skull	331	196
2. Fractured spine	45	20
3 Other fractures	26	1438
4. Concussion of brain	24	300
5. Severe general shock with bruises and cuts	8	5586
6. Slight shock and shake up		973
7. Internal injuries	153	173
8 Other injuries (sprains, dislocations, wrenches, etc.)		521
9 Cuts by glass (only)		595
10. Drowned	1	... ..
11. Burned	10	2
12. Asphyxiated.		....
13. Not stated		.. .. ..
Totals	598	9804

15. THE ROAD

	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage only
LOCATION				
1. Street intersection	4215	96	2442	1677
2. Between street intersections.	3316	124	1975	1217
3. Rural intersection...	661	19	295	347
4. Straight road	3804	204	1765	1835
5. Private driveway	33	1	9	23
6. Curve	686	39	296	351
7. Hill	409	23	170	216
8. R. R. crossing (a) Man on duty or gates.	24	3	8	13
9. R.R. Crossing (b) Automatic signal	37	9	17	11
10. R.R. Crossing (c) Unguarded.	130	24	47	59
11. Bridge......	142	5	61	76
12. On ferry or dock..	1			1
Totals	13458	547	7085	5826
TYPE				
1. Earth	101	8	46	47
2. Gravel or crushed stone.	1069	73	488	508
3. Paved—hard surface	12288	466	6551	5271
Totals	13458	547	7085	5826
SURFACE				
1. Dry surface	7993	375	4559	3059
2. Wet surface.	2571	94	1324	1153
3. Muddy surface	22	2	14	6
4. Snowy surface	1396	38	614	744
5. Icy surface ..	1476	38	574	864
6. Not stated				
Totals	13458	547	7085	5826
CONDITION				
1. In good condition.	13381	545	7062	5774
2. Defect in roadway	54	1	14	39
3. Road under repair	13	1	5	7
4. Obstruction not lighted.	10		4	6
Totals	13458	547	7085	5826

J. P. BICKELL,
Registrar of Motor Vehicles.

F9.
2500—MAY 1943 (C521)

PROVINCE OF ONTARIO
MOTOR VEHICLES BRANCH

SUMMARY OF MOTOR VEHICLE ACCIDENT STATISTICS ONTARIO DURING YEAR, 1945.

1. TYPE OF ACCIDENT

1. TYPE OF ACCIDENT	NUMBER OF ACCIDENTS				NUMBER OF PERSONS KILLED										
	Total	Fatal	Personal Injury	Property Damage only	Previous Year's Total All Ages	Total All Ages	0-4	5-14	15-35	36-54	55-64	65 and Over	Not Stated	Male	Female
1. Collision with pedestrian	2963	275	2688		213	279	30	67	32	34	48	68		199	80
2. Collision with other automobile	6590	83	2223	4284	93	101		2	46	24	12	17		79	22
3. Collision with horse drawn vehicle	109	7	58	44	1	7			2	4	1			7	
4. Collision with R R train	192	36	73	83	61	56	1	1	32	18	2	2		45	11
5. Collision with street car	367	5	160	202	7	7		1	4	1	1			6	1
6. Collision with other vehicles	26	1	10	15	1	2					1	1		1	1
7. Collision with fixed object	1306	44	550	712	50	49		3	25	9	7	5		41	8
8. Collision with bicycle	697	42	654	1	28	42		11	10	8	7	6		40	2
9. Collision with motorcycle	203	11	185	7	13	11			9	1		1		10	1
10. Non-collision accident	879	43	466	370	28	44	4	2	16	12	5	5		35	9
11. Miscellaneous	126		18	108	3										
TOTALS	13458	547	7085	5826	498	598	35	87	176	111	84	105		463	135

1. TYPE OF ACCIDENT	NUMBER OF PERSONS INJURED										
	Previous Year's Total All Ages	Total All Ages	0-4	5-14	15-35	36-54	55-64	65 and Over	Not Stated	Male	Female
1. Collision with pedestrian	2662	2840	307	911	461	448	317	293	103	1709	1131
2. Collision with other automobile	2901	3812	65	180	1794	1020	335	156	262	2114	1698
3. Collision with horse drawn vehicle	61	79	2	6	25	21	12	4	9	61	18
4. Collision with R R train	123	135	2	6	75	27	11	6	8	91	44
5. Collision with street car	215	249	5	7	126	67	28	6	10	146	103
6. Collision with other vehicles	9	20			6	2	4	2	6	16	4
7. Collision with fixed object	896	959	13	12	617	207	39	19	52	634	325
8. Collision with bicycle	739	679		240	270	77	44	16	32	542	137
9. Collision with motorcycle	164	251	1	5	211	20	4	1	9	223	28
10. Non-collision accident	575	761	12	36	455	161	48	23	26	520	241
11. Miscellaneous	28	19		2	10	4	1		2	14	5
TOTALS	8373	9804	407	1405	4050	2054	843	526	519	6070	3734

2. HOUR OF OCCURRENCE

2. HOUR OF OCCURRENCE	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
12 to 1 A.M.	492	24	235	233
1 to 2 A.M.	416	16	176	224
2 to 3 A.M.	251	12	118	121
3 to 4 A.M.	143	7	70	66
4 to 5 A.M.	102	3	38	61
5 to 6 A.M.	72	2	33	37
6 to 7 A.M.	143	6	69	68
7 to 8 A.M.	295	15	153	127
8 to 9 A.M.	385	10	201	174
9 to 10 A.M.	334	13	147	174
10 to 11 A.M.	377	19	172	186
11 to 12 A.M.	546	11	276	259
12 to 1 P.M.	560	14	310	236
1 to 2 P.M.	602	24	314	264
2 to 3 P.M.	702	30	354	318
3 to 4 P.M.	818	32	418	368
4 to 5 P.M.	921	36	548	337
5 to 6 P.M.	1232	52	738	442
6 to 7 P.M.	1088	44	608	436
7 to 8 P.M.	923	37	512	374
8 to 9 P.M.	791	25	431	335
9 to 10 P.M.	674	35	351	288
10 to 11 P.M.	747	39	378	330
11 to 12 P.M.	743	36	376	331
Not stated	101	5	59	37
TOTALS	13458	547	7085	5826

3. DAY OF OCCURRENCE

3. DAY OF OCCURRENCE	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Sunday	1449	48	756	645
2. Monday	1963	71	1046	846
3. Tuesday	1737	77	910	750
4. Wednesday	1635	69	878	688
5. Thursday	1804	74	941	789
6. Friday	2118	97	1120	901
7. Saturday	2752	111	1434	1207
8. Not stated				
TOTALS	13458	547	7085	5826

4. THE DRIVER

4. THE DRIVER	NUMBER OF DRIVERS			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
SEX				
1. Male	19161	617	8987	9557
2. Female	986	23	499	464
AGE				
1. Under 16 years	763	27	365	371
2. 16 to 24 years	4047	145	1907	1995
3. 25 to 40 years	8522	270	4012	4240
4. 41 to 54 years	4393	118	2080	2195
5. 55 to 64 years	1726	56	849	821
6. 65 years and over	376	23	163	190
7. Not stated	320	1	110	209
DRIVING EXPERIENCE				
1. Less than 3 months	115	3	54	58
2. 3 to 6 months	154	3	81	70
3. 6 to 12 months	101	4	46	51
4. 1 to 4 years	2939	89	1422	1428
5. 5 years and over	15797	448	7432	7917
6. Not stated	1041	93	451	497
CONDITION				
1. Intoxicated	242	13	103	126
2. Physical defect	53	1	27	25
3. Extreme fatigue	91	2	42	47
4. Normal	19761	624	9314	9823
LICENSE				
1. Licensed	19784	627	9295	9862
2. Unlicensed	363	13	191	159
3. Not stated				
Total number of drivers	20147	640	9486	10021
MISCELLANEOUS				
1. Hit and run	109	14	58	37
2. Hit and run apprehended	9	2	4	3
3. Arrested or summoned	3293	110	1646	1537
4. Non-residents arrested	87	3	41	43
Totals	3498	129	1749	1620

5. RESIDENCE OF DRIVER

5. RESIDENCE OF DRIVER	NUMBER OF DRIVERS			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
1. Ontario	19312	614	9136	9562
2. Quebec	142	3	54	85
3. Other provinces	50	1	22	27
4. Michigan	330	12	144	174
5. Ohio	27		17	10
6. New York	208	9	72	127
7. Illinois	11		5	6
8. Massachusetts	4		2	2
9. Pennsylvania	14	1	6	7
10. Other states	48		28	20
11. All others	1			1
Totals	20147	640	9486	10021

6. ACTION OF DRIVER

6. ACTION OF DRIVER	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Only Accidents
1. Speed too fast for road or traffic conditions	874	53	445	376
2. On wrong side of road	797	30	350	417
3. Did not have right of way	565	17	280	268
4. Cutting in	51	1	19	31
5. Passing standing street car	29		24	5
6. Passing on curve or hill	26		11	15
7. Passing on wrong side	25		11	14
8. Failed to signal	104		29	75
9. Car ran away—no driver	20	1	7	12
10. Drove off roadway	446	18	212	216
Totals	2937	120	1388	1429

7. DIRECTION OF TRAVEL

7. DIRECTION OF TRAVEL	NUMBER OF VEHICLES			
	Total	Fatal	Personal Injury	Property Damage Only
1. Going straight	15768	546	7537	7685
2. Turning right	615	14	267	334
3. Turning left	1786	36	863	887
4. Backing	263	12	129	122
5. Parked or standing still	1061	12	352	697
6. Slowing down or stopping	844	17	354	473
7. Skidding	679	22	258	399
Totals	21016	659	9760	10597

8. AMOUNT OF PROPERTY DAMAGE

$ 2,849,271

9. THE VEHICLE

9. THE VEHICLE	NUMBER OF VEHICLES			
	Total	In Fatal Accidents	In Personal Injury Accidents	In Prop'rty Damage Accidents
TYPE				
1. Passenger car	15389	417	7351	7621
2. Commercial vehicle	4447	186	1767	2494
3. Taxicab	407	8	154	245
4. Bus	389	17	195	177
5. Motorcycle	280	19	253	8
6. Trailer	24	5	7	12
7. All others	46	1	20	25
8. Not stated	34	6	13	15
Totals	21016	659	9760	10597
CONDITION				
1. In apparent good condition	20461	623	9472	10366
2. Brakes defective	182	14	113	55
3. Steering mechanism defective	50	1	14	35
4. Glaring headlights	11		5	6
5. One or both headlights out	41	4	24	13
6. Tail-light out or obscured	26	1	10	15
7. No chain (wet or icy road)				
8. Other defects in equipment	88	1	49	38
9. Puncture or blow-out	41	1	15	25
10. Not stated	116	14	58	44
Totals	21016	659	9760	10597
BRAKES				
1. Two-wheel	329	20	269	40
2. Four-wheel	20570	625	9432	10513
3. Not stated	117	14	59	44
Totals	21016	659	9760	10597
TIRES				
1. Pneumatic (high pressure)	573	30	216	327
2. Semi-balloon or balloon	20323	615	9482	10226
3. Solid rubber	3		3	
4. Not stated	117	14	59	44
Totals	21016	659	9760	10597
INSURANCE				
1. Insured	12636	372	5562	6702
2. Un-insured	6930	216	3588	3126
3. Not stated	1450	71	610	769
Totals	21016	659	9760	10597

10. Weather Conditions

10. Weather Conditions	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Clear	9768	411	5314	4043
2. Cloudy	827	38	377	412
3. Fog	87	3	36	48
4. Rain	2176	76	1107	993
5. Snow or Sleet	600	19	251	330
0. Not stated				
Totals	13458	547	7085	5826

11. Light Conditions

11. Light Conditions	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage Only
1. Daylight	7487	278	4042	3167
2. Dusk	512	17	249	246
3. Dark	5454	252	2791	2411
4. Not stated	5		3	2
Totals	13458	547	7085	5826

12. THE PEDESTRIAN

12. THE PEDESTRIAN	No. Accidents	
	Fatal	Non-Fatal
ACTIONS		
Crossing at street intersections:		
1. (a) With signal	2	132
2. (b) Against signal	12	131
3. (c) No signal	46	600
4. (d) Diagonally	3	47
5. Crossing between intersections	59	819
6. Waiting for or getting on or off street car	1	78
7. Standing in safety zone	1	10
8. Getting on or off other vehicle	1	34
9. Children playing in street	21	184
10. At work in roadway	6	23
11. Riding or hitching on vehicle	5	17
12. Walking on highway	40	106
13. Coming from behind parked vehicle or object	22	230
14. Crossing highway	50	215
15. On sidewalk	6	62
CONDITION		
1. Intoxicated	11	108
2. Physical defect	10	54
3. Confused by traffic	14	113
4. View obstructed	7	123
5. Normal	233	2290
Totals	275	2688

13. CLASSIFICATION OF VICTIMS

13. CLASSIFICATION OF VICTIMS	Killed	Injured
1. Drivers	125	1967
2. Passengers	133	3917
3. Pedestrians	283	2883
4. Others — (Persons in horse-drawn vehicles, etc.)	4	87
5. Bicyclists	40	682
6. Motorcycle drivers	9	189
7. Motorcycle passengers	4	79
Totals	598	9804

14. NATURE OF INJURIES

14. NATURE OF INJURIES	Fatal	Non-Fatal
1. Fractured skull	331	196
2. Fractured spine	45	20
3. Other fractures	26	1438
4. Concussion of brain	24	300
5. Severe general shock with bruises and cuts	8	5586
6. Slight shock and shake up		973
7. Internal injuries	153	173
8. Other injuries (sprains, dislocations, wrenches, etc.)		521
9. Cuts by glass (only)		595
10. Drowned	1	
11. Burned	10	2
12. Asphyxiated		
13. Not stated		
Totals	598	9804

15. THE ROAD

15. THE ROAD	NUMBER OF ACCIDENTS			
	Total	Fatal	Personal Injury	Property Damage only
LOCATION				
1. Street intersection	4215	96	2442	1677
2. Between street intersections	3316	124	1975	1217
3. Rural intersection	661	19	295	347
4. Straight road	3804	204	1765	1835
5. Private driveway	33	1	9	23
6. Curve	686	39	296	351
7. Hill	409	23	170	216
8. R. R. crossing (a) Man on duty or gates	24	3	8	13
9. R.R. Crossing (b) Automatic signal	37	9	17	11
10. R.R. Crossing (c) Unguarded	130	24	47	59
11. Bridge	142	5	61	76
12. On ferry or dock	1			1
Totals	13458	547	7085	5826
TYPE				
1. Earth	101	8	46	47
2. Gravel or crushed stone	1069	73	488	508
3. Paved—hard surface	12288	466	6551	5271
Totals	13458	547	7085	5826
SURFACE				
1. Dry surface	7993	375	4559	3059
2. Wet surface	2571	94	1324	1153
3. Muddy surface	22	2	14	6
4. Snowy surface	1396	38	614	744
5. Icy surface	1476	38	574	864
6. Not stated				
Totals	13458	547	7085	5826
CONDITION				
1. In good condition	13381	545	7062	5774
2. Defect in roadway	54	1	14	39
3. Road under repair	13	1	5	7
4. Obstruction not lighted	10		4	6
Totals	13458	547	7085	5826

J. P. BICKELL,
Registrar of Motor Vehicles.

ANNUAL REPORT

OF

THE COMMISSIONER

OF THE

ONTARIO PROVINCIAL POLICE

FROM

JANUARY 1st, 1946 TO DECEMBER 31st, 1946

PRINTED BY ORDER OF
THE LEGISLATIVE ASSEMBLY OF ONTARIO
SESSIONAL PAPER No. 34, 1947

ONTARIO

TORONTO
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1947

The Honourable Ray Lawson, O.B.E.,
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The Undersigned has the honour to present to Your Honour the Report of the Commissioner of the Ontario Provincial Police covering the period January 1st, 1946, to December 31st, 1946.

Respectfully submitted,
L. E. BLACKWELL,
Attorney-General.

Attorney-General's Department.

ONTARIO PROVINCIAL POLICE

Commissioner

W. H. STRINGER, O.B.E.

Deputy Commissioner

W. C. KILLING

Criminal Investigation Branch

A. H. WARD, CHIEF INSPECTOR

Inspectors

E. C. GURNETT, M.M.
W. J. FRANKS
W. H. KENNEDY
A. MACLEOD
G. MacKAY
W. H. LOUGHEED
F. C. KELLY
T. R. WRIGHT
C. W. WOOD
W. H. CLARK

PROVINCIAL CONSTABLE G. LONG (Photographer)

Staff Inspectors

A. MOSS
E. T. DOYLE
F. B. CREASY

Liquor Control Investigation Branch

P. WALTER, Staff Inspector

J. BARTLETT, Sergeant

A. M. SHAUGHNESSY, Sergeant

Firearms Registration Branch

W. H. BOYD, Registrar

District Inspectors

No. 1	District,	Windsor	District	Inspector	W. A. SCOTT
No. 2	"	London	"	"	C. A. JORDAN
No. 3	"	Hamilton	"	"	A. R. KNIGHT
No. 4	"	Niagara Falls	"	"	C. F. AIREY, M.S.M.
No. 5	"	Aurora	"	"	E. HAND
No. 6	"	Kitchener	"	"	W. A. PAGE
No. 7	"	Barrie	"	"	R. COX
No. 8	"	Belleville	"	"	H. E. THOMPSON
No. 9	"	Perth	"	"	T. W. COUSANS
No. 10	"	Haileybury	"	"	S. OLIVER
No. 11	"	Sudbury	"	"	T. WILKINSON
No. 12	"	Port Arthur	"	"	P. T. HAKE
No. 13	"	Kenora	"	"	H. STOREY

In Memoriam

Provincial Constable Thomas A. Suggett, Kingston Detachment, Number 8 District, Belleville, who was appointed January 1st, 1941, was drowned when he tripped and fell from the dock at Queen's University in the early morning of July 13th, 1946.

Report of the Commissioner of Police For Ontario

From January 1st, 1946, to December 31st, 1946

ONTARIO PROVINCIAL POLICE,
Headquarters, Toronto.

THE HONOURABLE THE ATTORNEY-GENERAL,
Parliament Buildings, Toronto, Ontario.

SIR:

I have the honour to submit herewith my Annual Report covering the work of the Ontario Provincial Police, together with statistical data for the period January 1st, 1946, to December 31st. 1946.

The Police Act, 1946

The enactment of The Police Act. 1946, passed by the Second Session of the Twenty-Second Legislature of Ontario, begun and holden at Toronto on the 4th March, 1946, has caused considerable interest amongst Municipal Councils and Police Departments in the Province of Ontario. This particular Act leaves no doubt as to the division of responsibility in connection with administration of the law between municipalities and the Ontario Provincial Police. This Force operated originally only in aid of local Forces at the request of the County Crown Attorney; or by direction of the Attorney-General.

The Provincial Government, while holding local authorities primarily responsible for law enforcement, found as time went on that in the various counties there was for the most part inefficient or insufficient exercise of police powers.

It, therefore, expanded this Force, and so stationed it that it commenced for the first time in its career to perform certain local policing functions in Southern Ontario.

The local authorities appear to have been so satisfied with this system that for the most part they have sought more and more Provincial service; although they have never lost their right to have their own Police if they so desired.

The Police Act, Sections 2 and 3, clearly define the division of responsibility and, in accordance with the provisions of the specified sections, a number of townships, or a portion thereof, villages, and special enterprises have been designated as responsible for law enforcemnt in their particular municipality or area. A list of such designated areas will be found on pages 16 to 31, inclusive, in the regulations made under this Act.

Prior to the introduction and enactment of this Act the responsibilities insofar as the Ontario Provincial Police were concerned were never clearly defined under the Constables Act. Consequently, it may well be understood, there were times when it was extremely difficult to establish a policy with respect to policing responsibilities. The application of the provisions of The Police Act should prevent and eliminate any future confusion along similar lines.

Another point which will prove interesting is the fact that under this legislation the regulations dealing with discipline, qualifications for appointment, etc. insofar as it affects police personnel throughout the Province have been made uniform or standard. This will, no doubt, ultimately prove beneficial to both the personnel employed in law enforcement work and those to whom they are responsible.

Policing of Municipalities

Up to the end of the year 1946, contracts have been entered into between the municipalities concerned and the Commissioner of Police for Ontario, under the provisions of the Municipal Act, R.S.O. 1937, Chapter 266, Section 383a, as enacted by 8 George VI, Chapter 39, Section 35, whereby the following municipalities are now being policed by members of the Ontario Provincial Police Force:

MUNICIPALITY	Effective Date	Number of Personnel
Ajax, Ontario County	1 June 1946	2
Alexandria, Glengarry County	15 Sept. 1945	2
Amherstburg, Essex County	1 Sept. 1946	2
Arnprior, Renfrew County	15 Oct. 1945	3
Atikokan Improvement District, Kenora District	1 Oct. 1946	1
Barrie, Simcoe County	1 July 1946	11
Bayham Township, Elgin County	1 June 1946	1
Beamsville, Lincoln County	1 May 1946	1
Brantford Township, Brant County	1 Nov. 1945	1
Cobalt, Timiskaming District	1 Aug. 1946	2
Cochrane, Cochrane District	1 July 1946	3
Colchester South Township, Essex County	4 Dec. 1946	1
Eganville, Renfrew County	1 Oct. 1945	1
Espanola Townsite, Sudbury District	1 June 1945	1
Hearst, Cochrane District	1 May 1946	2
Mersea Township, Essex County	22 Nov. 1946	1
Mount Forest, Wellington County	1 May 1946	2
McKim Township, Sudbury District	1 June 1945	2
Neelon and Garson Township, Sudbury District	1 Feb. 1946	2
Nipigon Township, Thunder Bay District	9 July 1946	1
Port Dalhousie, Lincoln County	16 Nov. 1946	1
Rockcliffe Park, Carleton County	1 June 1945	2
Schreiber Township, Thunder Bay District	1 Mar. 1946	1
Sioux Lookout, Kenora District	1 July 1946	2
Terrace Bay Townsite, Thunder Bay District	6 Nov. 1946	1
Uxbridge, Ontario County	1 Nov. 1946	1
Vankleek Hill, Prescott County	1 April 1946	1
Wasaga Beach Improvement District, Simcoe County	1 May 1946	1 plus 4 part time.

In each case, the municipality pays the sum of $1,750.00 per annum for the services of each member irrespective of rank. If an automobile is required, the upkeep of such vehicle is paid for by the municipality at the rate of .06c per mile in Southern Ontario and .07c per mile in Northern Ontario.

This system has proven very satisfactory both from the standpoint of the municipality concerned and this Force. The personnel employed on such municipal police duties are under the supervision and control of General Headquarters. It has been found that a more uniform basis of law enforcement results, than if such municipalities employed and selected their own personnel.

With the proclamation of The Police Act, 1946, this particular policing policy will continue throughout the Province with more satisfactory results in view of the fact that such Act defines, without doubt, the division of responsibility heretofore not clarified.

Radio Communication

During the Second Session of the Twenty-Second Legislature of Ontario, which commenced on the 4th March, 1946, the sum of $500,000.00 was voted for installation of a modern Frequency-Modulated radio communication system for the Ontario Provincial Police.

The services of Professor J. E. Reid, who is a registered professional engineer and a consultant in electronics and communications were retained by the Department of the Attorney-General of Ontario to conduct a survey and advise with respect to the installation of a radio communication system to adequately fulfill the requirements of this Force in Southern Ontario.

On August 12th, 1946, specifications for frequency modulated radio communication equipment for the proposed system were prepared and submitted to the following companies who desired to submit tenders for the consideration of the Government:

Northern Electric Company	R.C.A. Victor Company Limited
Canadian General Electric Company	Rogers Majestic Limited
Canadian Marconi Company	Bell Telephone Company

In the intervening period between the submission of the tenders by the above companies and the final acceptance of the successful tender by the Government, extensive experimental and test work was carried on in an effort to determine the merits and qualities of the equipment offered by the competing companies.

On November 23rd, 1946, tenders submitted by the aforementioned companies were opened by Commissioner William H. Stringer in the presence of Mr. C. R. Magone, K.C., Department of the Attorney-General, and Professor J. E. Reid, Radio Consultant. The tenders were then forwarded to The Honourable The Attorney-General. Under an Order-in-Council dated the 30th of January, 1947, the committee of Council authorized The Honourable The Attorney-General to enter into an agreement with the Canadian General Electric Company Limited for the supply, installation and maintenance of a Frequency-Modulated Radio Communication system for the Ontario Provincial Police.

The Ontario Provincial Police radio system will cover most of southern Ontario and later those parts of northern Ontario that are nearest centres of population. It has been deemed impractical to cover at the present time sections in southern Ontario that are sparsely populated, additional radio facilities to cover these areas can be provided later if found necessary.

The southern part of the Province is divided into nine districts with a district headquarters in each District; the general headquarters is in Toronto. In each District there are several detachments, some of these at present are operating from private residences, some have offices. Each District operates automobiles for highway patrol and other police duties.

The individual District allocation is indicated hereunder:

District No. 1 (Essex and Kent Counties)

A 250 watt station will be established at District Headquarters located at Chatham. A 60 watt station will be placed at Windsor.

District No. 2 (Elgin, Lambton, Middlesex and Oxford Counties)

A 250 watt station will be established at District Headquarters located at London. 60 Watt stations will be located at Sarnia, St. Thomas and Woodstock.

District No. 3 (Brant, Halton, Norfolk and Wentworth Counties)

A 250 watt station will be established at District Headquarters located at Dundas. 60 watt stations will be located at Simcoe and Brantford.

District No. 4 (Haldimand, Lincoln and Welland Counties)

A 250 watt station will be established at District Headquarters located at Niagara Falls. 60 watt stations will be located at Cayuga, Welland and St. Catharines.

District No. 5 and General Headquarters (Ontario, Peel and York Counties)

A 250 watt station will be established near Aurora and will serve both General Headquarters, Toronto, and Number 5 District Headquarters, Aurora. 60 watt stations will be located at Whitby and Brampton.

District No. 6 (Bruce, Grey, Huron, Perth, Waterloo and Wellington Counties)

A 250 watt station will be established at District Headquarters located at Mount Forest. 60 watt stations will be located at Owen Sound, Walkerton, Kitchener, Goderich, Guelph and Stratford.

District No. 7 (Dufferin, Simcoe, Muskoka and Parry Sound Counties)

A 250 watt station will be established at District Headquarters located at Barrie. 60 watt stations will be established at Parry Sound, Burks Falls and Bracebridge.

District No. 8 (Frontenac, Haliburton, Hastings, Lennox and Addington, Northumberland and Durham, Peterborough, Prince Edward and Victoria Counties)

A 250 watt station will be established at District Headquarters located at Belleville. This District is large, with some very sparsely populated regions. In addition to the District Headquarters a main 250 watt station will be established at Peterborough. 60 watt stations will be established at Kingston, Cobourg, Lindsay, Napanee and Picton.

District No. 9 (Carleton, Dundas, Glengarry, Grenville, Leeds, Lanark, Prescott, Renfrew, Russell and Stormont Counties)

A 250 watt station will be established at District Headquarters located at Perth. This District is also very large and of peculiar geographical shape. In addition to District Headquarters, a main 250 watt station will be established near Cornwall or Casselman and 60 watt stations at Arnprior, Brockville, Ottawa and Pembroke.

It will be noted that the communication as briefly outlined provides for main stations (250 watts) at each District Headquarters as indicated; also one at Peterborough in No. 8 District; and one at either Cornwall or Casselman in No. 9 District; making a total of eleven 250 watt stations. There will be thirty 60 watt fixed stations at the detachments specified. This proposed system will permit complete radio coverage over the area in the nine Districts and provide adequate control over approximately 281 mobile units owned and operated by the Force.

A survey throughout the area to be covered by the radio communication system with respect to the selection of sites for the fixed stations is practically completed and the allocation of frequencies for use in connection with the system is at present awaiting decision of the Federal authorities.

It is expected that installation will begin immediately following this authorization. The ultimate realization of actual operation in all nine districts is expected towards the latter part of the summer.

A fairly high standard of efficiency has been maintained in the past with the ordinary communication facilities, although it was known that the Provincial Police could not at any time effectively blanket any area when an outbreak of crime such as a bank robbery was reported. Criminals in possession of fast transportation, operating on good highways could be many miles away before the police received word of the commission of the crime.

The lack of radio communication between District Headquarters and mobile units was undoubtedly a serious handicap in law enforcement.

All previous communication difficulties will be removed after the installation of the latest type of Frequency Modulated radio which embraces all the developments created during the last war. Supervision of moving patrols will be greatly facilitated, since radio permits frequent checks on location and activities. These two factors alone are strong arguments for the use of radio telephone.

Transfer of General Headquarters, Toronto

Owing to the lack of office accommodation in the Parliament Buildings it was found necessary to vacate the offices occupied by General Headquarters since 1927.

New quarters were established at 13 Queen's Park Crescent and on October 15th, 1946, General Headquarters and all administrative branches were transferred to our present location, 13 Queen's Park Crescent.

The present accommodation is convenient with the exception there are no facilities for our stores which are still occupying space in the basement and on the fifth floor of the Parliament Buildings.

Transfer of No. 5 District Headquarters, Toronto to Aurora

On October 16th, 1946, the offices of Number 5 District Headquarters were transferred from the Parliament Buildings, Toronto, to the Municipal Building, Aurora.

This transfer became necessary due to the fact that the space occupied in the Parliament Buildings was required by other Departments, also on account of the proposed installation of radio. Aurora, by reason of its higher altitude and central location was considered much more suitable than Toronto.

Formation of New District

A recommendation has been submitted that Number 10 District with District Headquarters presently located at Haileybury, be divided and a new

District formed.

At the present time, Number 10 District has a frontage of 560 miles from the eastern boundary at Dieux Rivieres on the Ottawa River to the boundary of Thunder Bay District, about 65 miles west of Hearst.

Due to the large territory in this District, the District Inspector finds it practically impossible to maintain the constant supervision necessary in order that efficiency be maintained in the many detachments established in the area.

If the recommendation is approved a new District Headquarters will be established at Cochrane, with the necessary personnel and clerical staff. The District would embrace the following posts and detachments:

- Hearst
- Hearst Municipality
- Kapuskasing
- Cochrane
- Cochrane Municipality
- Iroquois Falls
- Timmins
- Matheson
- Smooth Rock Falls

The area of the new District will include the District of Cochrane, the northern portion of Algoma, extending from an imaginary line running parallel to the Canadian National Railway and twenty miles south thereof, and include that portion of the Canadian National Railway in the District of Thunder Bay up to and including Grant.

Prisoners of War

At the beginning of 1946, there were still approximately five thousand German Prisoners of War under detention in this Province. Some were in detention camps but the majority were engaged in industrial occupations such as lumbering, farming, brickmaking, etc.

During the year, the prisoners were being returned to the United Kingdom and the detention camps reverted to other purposes.

At present the only camp still functioning is that at Neys, Ontario, where a number of Japanese are quartered. Many prisoners have been permitted to have their families with them, and are usefully employed.

Industrial Unrest

During the year, strikes were called which affected the Steamship, Electrical, Rubber, Steel, Brass and Lumber industries of the Province.

Calls for assistance from this Force were made by the responsible authorities of the municipalities concerned and assistance was provided in the following instances:

On May 17, 1946—a strike was called by the Mine,.Mill and Smelters' Union, C.I.O. at the plant of the Anaconda American Brass Company Limited, New Toronto, which affected fourteen hundred employees.

This strike, which was peaceful for a time, became menacing and resulted in a call from the municipal authorities for assistance from this Force.

On June 27th, 1946, a detail of eighty officers and men was sent to assist the local authorities. This strike dragged on until October, when a settlement was arrived at and the personnel of this Force were returned to their posts.

On May 25, 1946—a strike was called by the Canadian Seamen's Union, CIO. on vessels sailing the Great Lakes and one hundred and forty-five officers and men were detailed for duty in the Welland Canal area, and sixty-five for duty in the St. Lawrence River area at Cornwall and Prescott.

On July 14th, 1946—a strike was called by the United Steel Workers' of America C.I.O. at all plants of the Steel Company of Canada. Two plants concerned in Ontario were at Sault Ste. Marie and Hamilton. There was no trouble at Sault Ste. Marie. All the strength of the union was concentrated at the Hamilton plant.

As the strike continued, violence between strikers and non-strikers was much in evidence and mob rule existed at the plant entrance.

The local police were unable to maintain law and order and the Police Commissioners of the City of Hamilton applied to the Attorney-General for assistance. On August 26th, 1946, a force which consisted of two hundred and twenty officers and men of this Force, with an equal number of members of the R.C.M. Police were sent to Hamilton to assist the local authorities in preserving order and preventing violence. The strike ended without anyone being seriously injured or extensive property damage, although there were spasmodic acts of violence which resulted in personal injuries and necessitated a number of arrests.

Identification Photography and Finger Printing

During the year the Criminal Investigation Branch has been supplied with some of the most modern equipment available. As a result, we are now in a position to turn out a very fine type of photography, which, in its particular class, can well be rated second to none.

New finger print equipment is also expected to prove its value as the occasion arises, and it can well be said that in this respect, our equipment has been brought to a state of practical efficiency.

Following is a list of some of the new equipment referred to above:

Omega D-11 Enlarger with accessories, including a copying attachment for photographing documents, small objects, etc.

Complete finger print equipment, including a post mortem kit for finger printing deceased persons and finger tissue builder kit, used to restore finger tips of deceased persons when the skin is partially decomposed, badly wrinkled, etc.

Special lighting units, with appropriate filters for ultra-violet and infrared photography of documents, dyes, etc. These methods aid in detecting alterations and erasures in writing, differences in colour, etc.

Moulage kit for preparing casts of foot prints, tire treads, weapons, death masks, finger prints in dust, etc.

Equipment for making photomicrographs in black and white or in colour.

A new 4 x 5 Speed Graphic Camera.

Prosecutions

There was a total overall of 20,696 prosecutions entered for all offences during the year, an increase of 4,491 over 1945.

They were distributed as follows:

Under the Criminal Code and relating Statutes, there were 7,053 prosecutions, an increase of 1,264 over 1945.

Under the Highway Traffic Act, there were 8,467 prosecutions, an increase of 2,678 over 1945.

Under the Liquor Control Act, there were 4,773 prosecutions, an increase of 1,227 over 1945.

Under the Revised Statutes of Ontario there were 294 prosecutions, a decrease of 50 over 1945.

Under the Revised Statutes of Canada, there were 59 prosecutions, a decrease of 26 over 1945.

Under Wartime Regulations, there were 50 prosecutions, a decrease of 602 over 1945.

Totals:	1946	20,696
	1945	16,605
Increase		4,491

The increase can be accounted for by reason of the number of prosecutions arising in municipalities now policed by members of this Force.

Crime

In the past few years, there has been a noticeable increase in the brutality utilized in crime classified in the first instance as murder. Some of the acts perpetrated create a serious doubt as to the mentality of the persons responsible. This is frequently reflected in the outcome of cases presented to the various Courts throughout the Province, where some of the accused persons have been pronounced unfit to instruct counsel. There is every reason to believe that some of the unsolved murders during the past few years, particularly some of the more brutal ones, have been perpetrated by persons with serious mental defections. This theory is based, for the most part, on the apparent lack of motive for the commission of the crime, combined with the brutal method of its accomplishment.

CRIMINAL OCCURRENCES REPORTED AND INVESTIGATED

	1946	1945
Murder	24	23
Manslaughter	29	22
Rape	31	27
Burglary	104	119
Shopbreaking	724	727
Housebreaking	1,058	1,123
Robbery with Violence	67	69
Robbery	75	62
Automobile Thefts	425	552
Other Thefts	3,095	3,174
TOTALS	5,630	5,898

Murder

Investigations were conducted during the year into the alleged murders of twenty-four persons, an increase of one over the year 1945.

Eighteen of the occurrences reported were in territory over which this force exercises jurisdiction. In the six additional cases, members of this Force were assisting Municipal Police Forces.

The investigations into five cases continued from 1945 were also completed.

A summary of results of these investigations is as follows:

Convicted and sentenced to be hanged	6
Convicted of Manslaughter	5
Convicted of Occasioning Bodily Harm	1
Committed to Mental Hospital	2
Committed Suicide	2
Acquitted	2
Awaiting Trial	6
Still under Investigation	5

Bank Robberies

The following bank robberies and attempted robberies were reported, investigated, and with one exception were satisfactorily cleared up:

January 19th, 1946—Bank of Nova Scotia, Marham, Ontario,
January 27th, 1946—Imperial Bank, Bolton, Ontario,
February 11th, 1946—Imperial Bank, Fonthill, Ontario,
April 28th, 1946—Royal Bank of Canada, Embrum, Ontario,
May 23rd, 1946—Bank of Toronto, Carlisle, Ontario,
May 31st, 1946—Bank of Commerce, Selkirk, Ontario,
June 13th, 1946—Provincial Bank of Canada, Tecumseh, Ontario.

Continued from 1945:
August 23rd, 1945—Bank of Montreal, Blenheim, Ontario,
September 26th, 1945—Royal Bank of Canada, Leaside, Ontario.

Matters Pertaining to other Police Departments

Investigations under The Constables Act

During the year, an Inspector of the Criminal Investigation Branch was assigned under the provisions of The Constables Act to investigate and enquire into and report upon the conduct and administration of the following police departments:

City of Guelph,

City of Timmins,

Town of Waterloo.

At the conclusion of the enquiry, reports were submitted to The Honourable The Attorney-General.

Night Mobile Patrols

It is regretted that the "Mobile Patrols" which had been so effective during the year 1944 could not be maintained because of the many and continuous calls on the Districts for extra personnel to perform special duties in connection with strikes, whereby the members of the Force doing both detachment and highway patrol duties were absent from their Districts many months during the year.

It is hoped, particularly with the added responsibilities imposed on the

Force under the Police Act, that the same conditions will not prevail in 1947, and that personnel will be retained at their posts. It will then be possible to put these effective patrols into operation again.

Highway Patrol Escorts

The Force provided many special escorts during the year including those for crippled children to their camps, funerals, and injured persons to and from air ports and hospitals.

Amongst the distinguished visitors to the Province for whom escorts were provided were:

General Dwight Eisenhower,

The Earl of Athlone and Princess Alice,

Governor-General Viscount Alexander of Tunis and Lady Alexander,

Field Marshal Viscount Montgomery,

Right Honourable Herbert Morrison, Lord Privy Seal,

His Excellency the Ambassador of France,
and other notable persons.

Highgrading

Members of the Force detailed for special duty under this heading have been active in all mining areas in Ontario, and have been able, by request, to materially assist the provinces of Quebec and Manitoba in their endeavours to suppress the illegal trafficking in gold.

However, it is noteworthy that the following extract from a report submitted by the Sergeant in charge of the Highgrade personnel reports to the contrary from the United States Customs officer at Detroit:

"I wish to draw your attention to the sharp decrease of prosecutions and investigations handled during the year 1946, in comparison with former years since the Highgrade Squad was formed. Very few complaints have been received from the mining industries and from our sources of information, it would appear that the sale of highgrade gold is practically at a standstill."

There has been the same excellent co-operation between the members of the forces engaged in the work and the United States Treasury and Federal officials, as in former years.

Registration of Firearms

In enforcing those sections of the Criminal Code dealing with the issuance of permits and the registration of firearms, care has been taken that the strict interpretation of the rights of individuals should not be interfered with.

The following permits were issued through the Firearms Registration Branch during the year:

Vendors' Permits	8
Permits to Purchase	2,098
Permits to Carry	811
Aliens' Permits	8,734

The large number of Aliens' Permits are accounted for by issuing permits to United States residents coming to this Province to hunt, etc.

Sale or Possession of Explosives

The issue of Explosive Permits was discontinued December 30th, 1946. This was a Wartime Measure under the Defence of Canada Regulations and Order-in-Council 2903 was repealed on the above date.

In this connection, the following extract from a letter received from the Chief Inspector of Explosives, Department of Mines and Resources, Ottawa, is of interest, in that it shows appreciation of the assistance given by the personnel of this Force in enforcing the provisions of the Order-in-Council referred to:

"Dear Commissioner:

Order-in-Council P. C. 2903, 4th July, 1940, passed under authority of The War Measures Act to regulate the sale, possession and use of explosives will be repealed in the near future on a date not yet fixed. When the date of repeal is set you will be notified at the earliest possible moment.

This Order-in-Council since it came into force has exercised a vital control over the purchase and possession of explosives, and its value and usefulness as a security measure has been greatly enhanced by the excellent support given it by Provincial and Dominion authorities having responsibility for the safe guarding of explosives.

May I take this opportunity of conveying to you and the members of your Force the sincere thanks of the Explosives Division for the excellent co-operation so generously given during the war years. The smooth operation of this Order-in-Council in Ontario could not have been possible without your aid, and its success was in a large measure due to the interest taken by members of your Force.

The issue of Explosives Purchase Permits placed added burdens on men who were already working long hours and carrying heavy responsibilities brought on by war conditions. The issue of permits must often have caused considerable inconvenience to your men but the manner and spirit in which they assisted, in spite of this and added duties, have been a source of great satisfaction to us.

I trust that the many helpful and pleasant contacts made with members of your Force throughout the Province may be renewed from time to time in the future. May I again assure you, Sir, that we deeply appreciate the invaluable service you have rendered in the interest of public safety."

Departmental Motor Transport

On December 31st, 1946, the Force was in possession of the following motor transport:

Highway Patrol Cars (white)	101
Utility Cars (black and white)	81
General Purpose Cars	51
Trucks	2
Motor Cycle	1
TOTAL	236

This is an increase of thirty motor vehicles over the number in operation on December 31st, 1945. This increase is accounted for by having to detail an automobile for duty in certain municipalities now policed by members of the Ontario Provincial Police, also additional equipment found necessary for use by the Highway Patrol.

DISTRIBUTION OF MOTOR VEHICULAR EQUIPMENT

	Headquarters	Districts													Totals
	H. Q.	1	2	3	4	5	6	7	8	9	10	11	12	13	
Highway Patrol Cars (white)		10	12	12	14	9	6	8	11	13	2	2	.....	2	101
Utility Cars (black & white)		6	4	5	4	8	9	5	6	10	9	5	4	6	81
General Purpose Cars	12	3	2	1	3	1	3	3	4	9	4	2	1	3	51
Trucks	2														2
Motor Cycle						1									1
TOTALS	14	19	18	18	21	19	18	16	21	32	15	9	5	11	236

DISTRIBUTION OF FORCE, DECEMBER 31st, 1946

	General Headquarters	Criminal Investigation Branch	I.C.I. Branch	No. 1 District	No. 2 District	No. 3 District	No. 4 District	No. 5 District	No. 6 District	No. 7 District	No. 8 District	No. 9 District	No. 10 District	No. 11 District	No. 12 District	No. 13 District	Total Strength
Commissioner	1																1
Deputy Commissioner	1																1
Staff Inspectors	3		1														4
Chief Inspector, C.I.B.		1															1
Inspectors, C.I.B.	10																10
Registrar of Weapon Permits	1																1
District Inspectors				1	2	1	1	1	1	1	1	1	1	1	1	1	14
Sergeants	2		2	1	1	1	1	2	1	2	1	2	3	1	1	1	22
Sergeants (Patrol)					1	1	1	1			1	1					6
Corporals				1	1		2		1	3	2	3	3	1		3	20
Provincial Constables	12	2		18	18	17	18	28	19	24	17	27	31	23	13	12	266
Prov. Constables (Patrol)				10	12	12	14	9	6	8	11	13	2	2	..	2	101
Prov. Constables (Prob.)				6	4	5	6	6	4	7	5	8	8	4	6	7	76
Supt. Police Garage	1																1
Asst. Supt. Police Garage	1																1
Chauffeurs					1	1			1			1					4
Mechanics	6														1		7
Garage Attendants	5																5
Accountants	2																2
Secretary	1																1
Clerks	17	1	1	1	1	1	2	1	1	1	1	3	1	2	1	1	36
Total Duty Strength	53	14	4	38	41	39	45	48	34	46	39	59	49	34	23	27	593
On Active Service						1										1	2
TOTALS	53	14	4	38	41	40	45	48	34	46	39	59	49	34	23	28	595

For purposes of administration the Province is divided into Headquarters and thirteen "Districts," each District being responsible for Law Enforcement within a certain geographical area.

Each District is divided into detachments with the detachment personnel responsible for Police Activities within a designated area.

Detachments and the number of personnel are indicated in the following table:

No. 1 District, Headquarters Windsor—
comprising the counties of Essex and Kent.

No. 2 District, Headquarters London—
comprising the counties of Lambton, Oxford, Middlesex and Elgin.

No. 3 District, Headquarters Hamilton—
comprising the counties of Wentworth, Brant, Halton and Norfolk.

No. 4 District, Headquarters Niagara Falls—
comprising the counties of Haldimand, Lincoln and Welland.

No. 5 District, Headquarters Aurora—
comprising the counties of York, Peel and Ontario.

No. 6 District, Headquarters Kitchener—
comprising the counties of Bruce, Perth, Grey, Wellington, Waterloo and Huron.

No. 7 District, Headquarters Barrie—
comprising the counties of Simcoe and Dufferin, and the Districts of Muskoka and Parry Sound.

No. 8 District, Headquarters Belleville—
comprising the counties of Victoria, Haliburton, Peterborough, Northumberland and Durham, Hastings, Lennox and Addington, Prince Edward and Frontenac.

No. 9 District, Headquarters Perth—
comprising the counties of Renfrew, Lanark, Dundas, Carleton, Grenville, Russell, Prescott, Stormont, Glengarry and Leeds.

No. 10 District, Headquarters Haileybury—
comprising the Districts of Temiskaming, Cochrane, Nipissing and a portion of Algoma.

No. 11 District, Headquarters Sudbury—
comprising the Districts of Sudbury, Manitoulin Island and a portion of Algoma.

No. 12 District, Headquarters Port Arthur—
comprising the District of Thunder Bay.

No. 13 District, Headquarters Kenora—
comprising the Districts of Kenora, Rainy River and Patricia.

LOCATION OF MEMBERS OF FORCE

Station or Detachment	Officers	Sergeants	Corporals	Prov. Cons.	Prov. Cons. H.P.	Mechanics Clerks, etc.
Headquarters Toronto	18	4		12		37
No. 1 District:						
Windsor Hqrs	1	1		12	1	1
Amherstburg				2	1	
Leamington				1	1	
Belle River					1	
Kingsville					1	
Dresden					1	
Wallaceburg				1	1	
Chatham			1	3	1	
Tilbury				1	1	
Essex					1	
Blenheim				1		
Mersea Twp.				1		
Colchester South Twp.				1		
Gosfield South Twp.				1		

LOCATION OF MEMBERS OF FORCE—Continued

Station or Detachment	Officers	Sergeants	Corporals	Prov. Cons.	Prov. Cons. H.P.	Mechanics Clerks, etc.
No. 2 District:						
London Hqrs	2	2	1	10	1	2
Strathroy				1	1	
Sarnia				2	1	
St. Thomas			1	2	1	
Woodstock				1	1	
Ingersoll					1	
Forest					1	
Lucan					1	
Tillsonburg				2		
Petrolia				1		
Wardsville					1	
Glencoe				1		
Straffordville				1		
Wallacetown					1	
No. 3 District:						
Hamilton Hqrs	1	2		11		2
Brantford				1	1	
Brantford Twp.				1		
Simcoe				2	1	
Paris				1		
Milton				1		
Waterdown				1	1	
Dundas					2	
Oakville					2	
Burlington					2	
Delhi				1		
Stoney Creek				1	1	
Acton					1	
Bronte					1	
Mount Hope				1		
Aldershot					1	
No. 4 District:						
Niagara Falls Hqrs	1	2	2	6	5	2
Ridgeway				2	1	
Welland			1	5	1	
Cayuga				2		
St. Catharines			1	4	2	
Grimsby					2	
Hagersville					1	
Dunnville					1	
Smithville					1	
Beamsville				1		
Fort Erie				2		
Port Dalhousie				1		
No. 5 District:						
Aurora Hqrs	1	2		8	4	1
Toronto		1		7		
Brampton				2	1	
Cooksville				1		
Oshawa				1	1	
Whitby				2		
Mimico					1	
Uxbridge				1		
Ajax				2		
Richmond Hill				1		
Islington					1	
Port Credit					1	
Birchcliffe					2	
Willowdale					1	
Scarboro Bluffs					1	
Beaverton				1		
Malton				2		
Humber Bay					1	
Thornhill					1	

LOCATION OF MEMBERS OF FORCE—Continued

Station or Detachment	Officers	Sergeants	Corporals	Prov. Cons.	Prov. Cons. H.P.	Mechanics Clerks, etc.
No. 6 District:						
Kitchener Hqrs	1	1		7	1	2
Walkerton				1	1	
Wiarton				1		
Goderich				2	1	
Stratford				1	1	
Listowel				1		
Guelph				1	1	
Flesherton				1		
Owen Sound			1	1	1	
Mitchell				1		
Arthur				1	1	
Galt				1		
Clinton					1	
Kincardine				1		
Mount Forest				2		
No. 7 District:						
Barrie Headquarters	1	1		6	2	1
Alliston				1		
Midland				1	1	
Orillia				1	1	
Collingwood				1	1	
Orangeville				1	1	
Bracebridge				1		
Huntsville					1	
Gravenhurst				1	1	
Parry Sound			1	2		
Burks Falls				3		
Bradford					1	
Wasaga Beach			1	2		
Bala				1		
Town of Barrie		1	1	8		
Bondhead					1	
Tottenham				1		
No. 8 District:						
Belleville Hqrs	1	2		6		1
Madoc				1		
Lindsay				1	1	
Peterborough			1	2	1	
Cobourg				2		
Bowmanville				1	1	
Havelock				1		
Haliburton				1		
Frankford				1		
Campbellford				1		
Napanee				1	1	
Colborne					1	
Kingston			1	1	2	
Bancroft				2		
Picton					1	
Brighton				1		
Northbrook				1		
Marmora					1	
No. 9 District:						
Perth Headquarters	1	2		7		2
Rockland				1	1	
Cornwall			1	3	1	
Eganville				1		
Morrisburg				1	1	
Renfrew				1		
Pembroke			1	1		
Kemptville					1	
Ottawa		1		3		1
Brockville				1	1	

LOCATION OF MEMBERS OF FORCE—Continued

Station or Detachment	Officers	Sergeants	Corporals	Prov. Cons.	Prov. Cons. H.P.	Mechanics Clerks, etc.
No. 9 District—Con.						
Prescott				1	1	
Hawkesbury				1		
Casselman				1		
Alexandria				2	1	
Arnprior			1	3		
Gananoque					1	
Britannia Heights					1	
Barry's Bay				1		
Carleton Place					1	
Rockcliffe Village				1	1	
Lancaster				1		
Vankleek Hill				1	1	
Chalk River					1	
Stonecliff					1	
Toledo				1		
Killaloe Station					1	
Elgin					1	
No. 10 District:						
Haileybury Hqrs	1	1		5		1
Iroquois Falls				1		
Matheson				1		
Elk Lake				1		
Timmins		1		3		
Kirkland Lake			1	2		
Larder Lake				1		
Kapuskasing				3		
Englehart				1		
North Bay			1	2		
Sturgeon Falls				2		
Mattawa				1		
Temagami				2		
Cochrane		1		6		
Hearst			1	3		
Powassan				1		
Matachewan				1		
Matheson				1		
McGarry Twp.				2		
Cobalt				2		
No. 11 District:						
Sudbury Hqrs	1	1		9	1	1
Warren				1		
Foleyet				1		
Gore Bay				1		
Sault Ste. Marie			1	1	1	
Blind River				1		
Chapleau				1		
Bruce Mines				1		
WaWa				1		
Espanola Townsite				1		
McKim Township				1	1	
Neelon & Garson				2		
Hornepayne				1		
Gogama				1		
Capreol				1		
Espanola				1		
Little Current				1		
No. 12 District:						
Port Arthur Hqrs	1	1		6	2	2
Nipigon				1	1	
Beardmore				1		
Geraldton				1		
Marathon				1		

LOCATION OF MEMBERS OF FORCE—Continued

Station or Detachment	Officers	Sergeants	Corporals	Prov. Cons.	Prov. Cons. H.P.	Mechanics Clerks, etc
No. 12 District—Con.						
Schrieber				2		
Nakina				1		
Terrace Bay				1		
Armstrong				1		
No. 13 District:						
Kenora Hqrs.	1	1		4		1
Sioux Lookout			1	3		
Dryden				2		
Fort Frances			1	2		
Rainy River				1		
Red Lake			1	4		
Central Patricia				1		
Ignace					1	
Emo					1	
Favourable Lake				1		
Atikokan				1		
McKenzie Island				1		
Hudson				1		

Personnel Strength

At midnight, December 31st, 1946, the total strength of all ranks of the Force, including temporary and civilian personnel, was five hundred and ninety-five (595), less two (2) members of the Force on Active Service with the C.A.S.F., making a total duty strength of five hundred and ninety-three (593).

Personnel Increase

To provide the extra men necessary to police the several municipalities, and to cope with the increase in traffic accidents and crime, additional Constables have been appointed to the Force.

In selecting these recruits, only returned servicemen with a record of service in an actual theatre of war are given consideration.

CHANGE IN PERSONNEL

During the period January 1st, 1946, to December 31st, 1946, the following appointments to and retirements from the Force became effective:

APPOINTMENTS

Provincial Constables	107

PROMOTIONS

January 1st, 1946—Acting Inspector C. W. Wood, C.I.B., Toronto, promoted to Inspector.

January 7th, 1946—Provincial Constable E. L. Priest, Grimsby Detachment, promoted to Corporal.

February 1st, 1946—Corporal W. G. Tomlinson, A.G.S., G.H.Q., promoted to Sergeant.

February 1st, 1946—Provincial Constable A. Macleod, Cobourg Detachment, promoted to Acting Inspector, C.I.B., Toronto.

February 1st, 1946—Provincial Constable T. R. Wright, No. 2 District Headquarters, London, promoted to Acting Inspector, C.I.B., Toronto.

February 1st, 1946—Provincial Constable W. H. Clark, No. 5 District Headquarters, Toronto, promoted to Acting Inspector, C.I.B., Toronto.

March 1st, 1946—District Inspector F. B. Creasy, No. 11 District Headquarters, Sudbury, promoted to Staff Inspector.

April 1st, 1946—Provincial Constable W. N. Peters, Elmvale Detachment, promoteed to Corporal.

April 1st, 1946—Provincial Constable E. M. Richardson, Red Lake Detachment, promoted to Corporal.

April 1st, 1946—Provincial Constable J. S. McBain, Fort Frances Detachment, promoted to Corporal.
May 1st, 1946—Sergeant T. W. Wilkinson, No. 5 District Headquarters, Toronto, promoted to District Inspector.
May 1st, 1946—Provincial Constable T. W. Griffin, Hearst Detachment, promoted to Corporal.
June 1st, 1946—Corporal A. R. MacLeod, Pembroke Detachment, promoted to Sergeant.
June 1st, 1946—Provincial Constable A. S. Ericksen, Rainy River Detachment, promoted to Corporal.
July 1st, 1946—Provincial Constable D. P. Morris, Peterborough Detachment, promoted to Corporal.
July 1st, 1946—Provincial Constable I. Robbie, Kincardine Detachment, promoted to Corporal.
July 1st, 1946—Provincial Constable J. R. Brown, Owen Sound Detachment, promoted to Corporal.
July 1st, 1946—Provincial Constable H. Ramsbottom, Harrow Detachment, promoted to Corporal.
July 1st, 1946—Corporal H. H. Peel, Welland Detachment, promoted to Sergeant.
August 1st, 1946—Clerk G. F. Long, C.I.B., Toronto, promoted to Provincial Constable.
September 1st, 1946—Provincial Constable L. C. Carr, No. 9 District Headquarters, promoted to Corporal.
November 1st, 1946—Provincial Constable J. Bartlett, G.H.Q., promoted to Sergeant.
November 1st, 1946—Provincial Constable A. M. Shaughnessy, G.H.Q., promoted to Sergeant.
November 1st, 1946—Corporal T. Riding, G.H.Q., promoted to Sergeant.
November 1st, 1946—Provincial Constable J. H. Marsland, Pembroke Detachment, promoted to Corporal.
December 1st, 1946—Corporal G. V. Clubbe, Brantford Detachment, promoted to Sergeant.
December 1st, 1946—Sergeant A. J. B. Craik, No. 2 District Headquarters, London, promoted to District Inspector.

DEATHS

July 13th, 1946—Provincial Constable T. A. Suggett, Kingston Detachment.

SUPERANNUATED

December 31st, 1946—District Inspector H. E. Thompson, No. 8 District Headquarters, Belleville.

RESIGNATIONS

December 7th, 1945—Provincial Constable D. H. Brown, Arnprior.
January 15th, 1946—Provincial Constable A. A. Stark, Alexandria.
January 21st, 1946—Provincial Constable A. J. McColl, Toronto.
February 9th, 1946—Provincial Constable D. J. Jordan, Port Arthur.
February 11th, 1946—Provincial Constable J. D. G. Sutherland, Whitby.
February 15th, 1946—Provincial Constable J. Barry, (Probationary) Sudbury.
March 9th, 1946—Provincial Constable F. Hindle, London.
March 14th, 1946—Provincial Constable E. J. MacMillan, London.
March 31st, 1946—Provincial Constable O. LeBlanc, (Probationary) Alexandria.
March 31st, 1946—Provincial Constable J. C. Goodin, (Probationary) Ottawa.
March 31st, 1946—Provincial Constable L. E. West, Port Credit.
March 31st, 1946—Provincial Constable W. J. Burrell, Welland.
April 30th, 1946—Provincial Constable J. Blenkin, Toronto.
May 15th, 1946—Provincial Constable H. J. Tinson, Belle River.
May 31st, 1946—Provincial Constable A. O. Ferguson, Hawkesbury.
June 14th, 1946—Provincial Constable J. A. Truaisch, Kingston.
June 15th, 1946—Provincial Constable D. C. Kennedy, (Probationary) G.H.Q., Toronto.
June 22nd, 1946—Provincial Constable C. W. O'Brien, Kingston.
June 24th, 1946—Provincial Constable J. J. Bilecky, (Probationary (G.H.Q., Toronto.
June 29th, 1946—Provincial Constable J. R. Dewar, (Probationary) Hearst.
June 29th, 1946—Provincial Constable A. L. Weirmier, (Probationary) G.H.Q., Toronto.
July 1st, 1946—Provincial Constable O. H. Brown, Orangeville.
July 28th, 1946—Provincial Constable G. H. Ellis, Mount Forest.
July 31st, 1946—Provincial Constable W. Kennedy, Kenora.
July 31st, 1946—Provincial Constable E. Rose, Brantford.
August 15th, 1946—Provincial Constable G. Dockray, (Probationary) Red Lake.
September 9th, 1946—Provincial Constable E. A. Webb, London.
September 30th, 1946—Provincial Constable S. C. Bell, (Probationary) Ottawa.
October 7th, 1946—Provincial Constable W. E. Ellett, Alexandria.
November 15th, 1946—Provincial Constable W. Marsland, Woodstock.
November 30th, 1946—Provincial Constable W. O. Tougas, (Probationary) G.H.Q., Toronto.

December 9th, 1946—Provincial Constable J. G. McMillan, Schreiber.
December 31st, 1946—Provincial Constable S. W. Bray, (Probationary) Tottenham.

DISMISSALS

January 6th, 1946—Provincial Constable B. J. Gifford, Smith Falls.
January 14th, 1946—Provincial Constable L. A. Maguire, Niagara Falls.
April 25th, 1946—Provincial Constable J. D. Bennett, Woodstock.
June 21st, 1946—Provincial Constable H. Lemon, Guelph.
November 27th, 1946—Provincial Constable F. L. Thompson, Haileybury.

RETURNED FROM ACTIVE SERVICE

Provincial Constable W. A. Kennedy, January 7th, 1946.
Clerk R. Davis, January 21st, 1946.
Provincial Constable S. Ervine, January 21st, 1946.
Provincial Constable D. Adair, January 21st, 1946.
Provincial Constable J. B. Sheff, January 23rd, 1946.
Provincial Constable V. P. Coffey, January 25th, 1946.
Provincial Constable R. E. Raymer, January 28th, 1946.
Provincial Constable L. M. MacGillivray, February 7th, 1946.
Provincial Constable V. L. Scherer, February 15th, 1946.
Provincial Constable M. A. Bruce, February 15th, 1946.
Provincial Constable J. A. Rodgers, February 15th, 1946.
Provincial Constable J. Craig, February 15th, 1946.
Provincial Constable A. S. Andrews, February 25th, 1946.
Provincial Constable J. D. Crosson, March 1st, 1946.
Provincial Constable J. F. Blenkin, March 11th, 1946.
Provincial Constable J. G. McMillan, March 11th, 1946.
Provincial Constable S. G. Batt, March 14th, 1946.
Provincial Constable R. J. Spofford, March 15th, 1946.
Provincial Constable E. F. Wright, March 15th, 1946.
Provincial Constable G. G. Barber, March 25th, 1946.
Provincial Constable J. E. Johnson, July 24th, 1946.
Provincial Constable J. W. Callander, October 15th, 1946.
Provincial Constable L. L. Shipley, November 15th, 1946.

The following members of the Force are still on Leave of Absence for War Services:

Barker, F. L.	Provincial Constable	July 15th, 1942	C.A.S.F.
Callaghan, E. S.	Provincial Constable	October 14th, 1941	C.A.S.F.

Commendations

The following members of the Force were commended in Police Orders for outstanding service:

Provincial Constable E. M. Richardson, Fort Frances Detachment.
Provincial Constable W. A. Parfitt, Fort Frances Detachment.
Provincial Constable R. A. Young, Emo Detachment.
Provincial Constable A. S. Ericksen, Rainy River Detachment.
District Inspector F. B. Creasy, No. 11 District Headquarters, Sudbury.
Sergeant N. C. Smaill, No. 11 District Headquarters, Sudbury.
Provincial Constable J. S. McBain, No. 11 District Headquarters, Sudbury.
Provincial Constable R. H. Pepper, Warren Detachment.
Provincial Constable D. H. Porter, North Bay Detachment.
Provincial Constable R. E. Penner, Temagami Detachment.
Inspector G. Mackay, C.I.B., Toronto (2).
Provincial Constable L. Neil, No. 1 District Headquarters, Windsor (2).
Provincial Constable K. W. McLay, Delhi Detachment.
Provincial Constable W. J. McBride, St. Catharines Detachment (2).
Provincial Constable N. P. Budd, St. Catharines Detachment (2).
Provincial Constable T. W. Griffin, Hearst Detachment.
Inspector W. J. Franks, C.I.B., Toronto (2).
Sergeant C. W. Farrow, No. 3 District Headquarters, Hamilton.
Provincial Constable R. Reynolds, Brantford Detachment.
Corporal W. G. Tomlinson, Anti-Gambling Squad, Headquarters, Toronto.
Provincial Constable C. Von Zuben, Anti-Gambling Squad, Headquarters, Toronto.
Provincial Constable J. F. Cronin, Anti-Gambling Squad, Headquarters, Toronto.
Provincial Constable J. E. Legate, Anti-Gambling Squad, Headquarters, Toronto.

Acting Inspector C. W. Wood, C.I.B., Toronto (3).
Provincial Constable N. P. Fach, St. Catharines Detachment (2).
Provincial Constable J. F. Craig, Geraldton Detachment.
Sergeant J. A. Stringer, No. 6 District Headquarters, Kitchener.
Provincial Constable H. Gibson, No. 6 District Headquarters, Kitchener.
Provincial Constable B. R. Woods, No. 6 District Headquarters, Kitchener.
Provincial Constable L. Meyer, No. 6 District Headquarters, Kitchener.
Inspector F. C. Kelly, C.I.B., Toronto (3).
Provincial Constable G. Yuile, Brampton Detachment (2).
Provincial Constable L. R. Taylor, No. 3 District Headquarters, Hamilton.
Provincial Constable F. Fox, Goderich Detachment.
Provincial Constable W. Wellheiser, No. 2 District Headquarters, London.
Inspector W. H. Lougheed, C.I.B.., Toronto.
Inspector W. H. Kennedy, C.I.B., Toronto (2).
Sergeant W. D. Duncan, No. 1 District Headquarters, Windsor.
Provincial Constable W. E. Smith, Napanee Detachment
Provincial Constable T. H. Trimble, Ottawa Detachment.
Provincial Constable J. A. Morden, Napanee Detachment.
Acting Inspector W. H. Clark, C.I.B., Toronto.
Inspector E. C. Gurnett, C.I.B., Toronto (2).
Provincial Constable L. W. Johns, No. 5 District Headquarters, Toronto.
Provincial Constable J. E. Johnson, Wiarton Detachment.
Provincial Constable J. Brown, Owen Sound Detachment.

District Inspection

I visited all Districts and a number of separate Detachments during the year, where I reviewed personnel and inspected uniform and office equipment.

I also conferred with judicial officials and leading citizens regarding the work of the Force.

I found the members of the Force to be held in high esteem, and law enforcement to be generally satisfactory.

I also held investigations into complaints of misconduct by members of the Force, and, where necessary, recommended certain disciplinary action for your approval.

Conduct and Discipline

The conduct and discipline of all ranks has, with minor exceptions, been excellent, and a high standard of efficiency has been maintained.

The members of the Force have shown a commendable spirit of loyalty and service in the manner in which they have performed their duty. Many letters of commendation have been received speaking in the highest terms of courtesy shown and services rendered by members of the Force.

Training School

During the spring and early summer of 1946, three sessions of our Training School were held, commencing on February 11th, May 1st, and June 11th, 1946. Each session lasted approximately six weeks and had an attendance of twenty, twenty-seven, and nineteen respectively. All were recruits.

The instruction given at each of these classes covered a wide field of law enforcement matters and interior economy of the Force.

Since the removal of our Headquarters to 13 Queen's Park Crescent, we have space set aside for a school room, and are now able to conduct our training of recruits under more favourable conditions than in the past. The school is now functioning as an integral part of our Headquarters administration with a Staff Inspector in charge of training.

We have held one session of the school in our new quarters which commenced on October 15th, and lasted until November 29th, with thirty recruits in attendance.

The four sessions of the school held during the year were very successful and started the new men on their chosen career with an elementary knowledge of their duties and what is required of them as servants of the public.

DEATHS FROM ACCIDENTS, MISADVENTURES, ETC.

Tornado, Essex County

At about 6:00 p.m., June 17th, 1946, a tornado which began at River Rouge, Michigan, quickly crossed the Detroit River, and struck with all its fury on the Canadian shore at Ojibway. The tornado, a swirling black finger of destruction, cutting a swath 100 to 400 feet wide, lashed its way through Ojibway and the townships of Sandwich West and East which border on the city of Windsor and spent itself on Lake St. Clair. It had, in twenty minutes, created havoc and devastation never before witnessed in these parts. Men, women, children, animals, vehicles, homes and other buildings were sucked into its vortex and spun out again, shattered into hundreds of fragments. Seventeen people were killed and many injured and left homeless. Windsor was without electricity for almost 24 hours with its accompanied burden on all hospitals and public services. $500,000.00 was the estimation of property damage. Services were volunteered by Red Cross, various organizations and individuals. The Windsor Daily Star started a relief fund and it was quickly organized with sums of money donated from various parts of Canada and the United States.

City and township officials met and conferred with police on general conditions following the storm. Wires were down, roads were blocked and looting of property and an influx of sightseers resulted in a request to the Attorney-General for the assistance of the Provincial Police. The majority of the local detachment was absent on strike duty. In response to this plea, thirty-one Provincial Police officers and men were sent into this District and placed strategically throughout the storm area on June 22nd and 23rd. On June 24th, the officials of the municipalities expressed their appreciation for the services of the police. The situation was under control, and they were forthwith returned to their respective Districts.

Destruction by Fire, Richmond Township, Lennox County

At approximately 4:30 a.m., February 5th, 1946, a frame house situated on what is known as the Old Belleville Road in Richmond Township, about four and one-half miles west of Napanee caught fire and burned to the ground. Within, four persons were fatally burned, namely; Reginald Brown, age 48 years,owner of the residence; Margaret Brown, age 15 years; Aileen Brown, age 13 years; and Ivan Wager, age 3 years and nine months.

The fire originated in the kitchen from an overheated stove and almost immediately the entire dwelling became a raging inferno which left no avenue of escape for the unfortunate occupants.

Coroner, Doctor T. M. Galbraith of Napanee was in attendance and after viewing the remains of the four deceased persons instructed that no inquest was necessary.

Death by Suffocation, Hastings County

At 6:30 a.m., November 18th, 1946, while one Ephriam Ray of the village of Madoc was attending his morning chores, he noticed that the second storey of his home was on fire. Ray immediately attempted to enter the burning house with a view of rescuing his wife and six children who were asleep therein. Each time he attempted to enter the burning house he was driven back by the intense heat. He finally collapsed to the ground exhausted from fumes and smoke.

Every possible effort was made to rescue the occupants of this house but to no avail. The fire itself was almost instantaneously beyond control and fire fighting could only be employed to prevent it from spreading to the surrounding buildings.

Searchers found the bodies of Mrs. Velma Ray and her six children still in the positions that had been assumed by the deceased persons in sleep, and this led to the belief they were suffocated in their sleep by the heavy smoke and fumes.

The remains of the deceased persons, namely: Mrs. Velma Ray, age 30 years; Douglas, age 11 years; Doreen, age 9 years; Allan, age 7 years; Ella, age 5 years; Dianna, age 3 years; and Emerson, age 10 months were viewed by the Coroner, Doctor S. R. Beatty of Madoc, who ordered an inquest to be held in Madoc on November 21st, at which time the Coroner's Jury returned a verdict, attaching no blame to Ephriam Ray and commended him for his gallant efforts to save his family.

Traffic Fatalities

Four Persons Killed, Highway 15, Lanark County

On September 2nd, 1946, an auto fatality occurred on Highway Number 15 near Crosbey in Lanark County in which Morley McNish, Bertha Anerey, Isabel Mills and James Caskie, all of Toronto, were killed.

Investigation showed the fatality was due to excessive speed on a curve.

Five Persons Killed, Highway 17, Carlton County

On October 12th, 1946, an automobile containing six persons was parked on Number 17 Highway west of Alfred, unable to proceed on account of defective lights, when a transport tractor and trailer crashed into the automobile. George Desormeaux; his wife Ella; George Desormeaux, Jr., and his wife Helen; and Pauline Desormeaux, age 8 years, were killed. Antoinette, age 12 years, was the only one saved.

In this case the auto took fire which prevented immediate recovery of the bodies of the deceased persons.

Drownings

Deaths from Drowning, Ottawa River

On May 25th, 1946, it was reported to the Pembroke Detachment that Joseph Lavoie, father, and his two children, Telesphore and Jeanette, had been drowned whilst crossing the Ottawa River from Malakoff, Quebec, to Mackey Station, Ontario.

The bodies of Joseph and Telesphore Lavoie were recovered on July 2nd, 1946.

Deaths from Drowning, St. Lawrence River

On August 18th, 1946, William Barnes, Gordon Robertson, and Roland Parthenais, all of Cornwall, were drowned whilst crossing the St. Lawrence River near Flannigan's Point.

All three bodies were recovered.

Missing Person

James Wedgery, Missing from C.N.R. Train, Ferland

On September 10th, 1946, a telegram was received from Superintendent G. T. Dunn, Canadian National Railways, Hornepayne, that one James Wedgery was missing. The Armstrong Detachment was detailed by telegram to this investigation and it was learned that Wedgery, age 78 years, a retired C.N.R. brakeman, left the home of his sister, Mrs. W. C. Neal, Woodstock, Ontario, on September 7th, enroute to Dauphin, Manitoba. Mr. Wedgery, who suffered from brief spells of amnesia, is alleged to have had a large sum of money in his possession, also bank books, etc. He was last seen when train number 3 stopped at Ferland, Ontario, in the Thunder Bay District on September 8th, 1946. Extensive searches have been made by members of the C.N.R., The Department of Lands and Forests, also this Department. Enquiries have been made through the Royal Canadian Mounted Police in Manitoba and descriptive circulars were distributed throughout the Province.

Searches were continued until the middle of November when snow made further search impossible. Investigations are still being continued although it is believed that Wedgery, on leaving the train, wandered into the surrounding bush and became exhausted and died or was able to board another train and disappeared for parts unknown.

Registration of Firearms

The following is a summary of permits issued by the Firearms Registration Branch during the year:

Vendor's Permits

Eight Vendor's Permits to buy and sell revolvers and pistols were issued to sporting goods dealers. Before a permit is issued each dealer is thoroughly investigated by the District Inspector concerned and a recommendation or otherwise submitted by him. A number of applications for such permits have been received from individuals requesting permission to operate from their private residences. These have all been refused and permits issued only to persons operating a recognized store in premises set aside for such business only.

Purchase Permits

The great volume of work entailed in this branch is brought about by the transfer of weapons between individuals. The loan, sale, or gift of a revolver or pistol requires the submission of an application by the receiver of the weapon who can properly supply all details of the weapon to be transferred and the application must be recommended by a senior police official within whose district the recipient resides. A permit is not issued until the weapon has been checked to show that it is legally possessed. The transfer is not complete until a Record of Sale Card, which is made out at this office, has been signed by the seller and mailed to this office to show that the exchange has been made.

Carrying Permits

In administering the law regarding the carrying of concealed weapons, an endeavour has been made to exercise care not to interfere with the rights of individuals, but the fewer people carrying concealed weapons the better, therefore, permits have been issued only to persons who could show that it was necessary and in the interests of public safety.

Almost all new permits to carry were issued to banks, trust companies, express companies, large firms for payroll protection, and to members of revolver clubs.

Numerous applications were received from Canadian and American sportsmen for the privilege of carrying revolvers or pistols while hunting and fishing. These requests were properly refused as it is felt that the possession of such weapons at hunting and fishing camps was unnecessary.

A considerable number of Carrying Permits sent in for renewal were cancelled when a check showed that the original reason for issue no longer existed.

Aliens' Permits

United States sportsmen still require a permit from this office to possess rifles and shotguns while in the Province of Ontario. The hunting season rush was satisfactorily handled with the assistance of our Fort Frances Detachment. The latter took care of American sportsmen who entered Ontario at that point. A new system was put into effect whereby American sportsmen were instructed to retain their Permits and return them to this office for renewal at the beginning of each year. This has had very favourable results and has cut down the work of the branch considerably.

A considerable number of permits were issued to Aliens of good character residing in Ontario who turned in their weapons at the beginning of the war. These firearms have been returned to their owners.

Explosive Permits

The issuing of Explosive Permits was discontinued on December 31st, 1946. This was a Wartime measure under The Defence of Canada Regulations. Permits are, therefore, no longer necessary for bona fide British subjects to purchase or possess explosives in Canada.

Stolen Weapons

A number of stolen weapons were located and returned to their rightful owners.

Canadian or United States Government Property

A check was made with the Royal Canadian Mounted Police, Ottawa, on any weapons which appeared to be Canadian or U.S. Government property.

As a result, several were seized and turned over to the Canadian Army Ordnance, Toronto, and the Military Attache, U.S. Embassy, Ottawa, Ontario.

AUTOMATIC FIREARMS REGULATION, 1945

This deals with fully automatic firearms such as machine guns and sub-machine guns. The only permits issued under this regulation during the year 1946 are as follows:

Five (5) to enable such weapons to be given or sold to regularly organized police departments in the Province for law enforcement purposes;

Three (3) to recognized public museums to possess old type machine guns, souvenirs of World War I, of a weight and in such a mechanical condition as to preclude their use for illegal purposes;

Ten (10) to individuals to possess old type machine guns, souvenirs of World War I, all in such mechanical condition as to prevent their illegal use;

One (1) to permit a Bren gun to be given to a Sea Cadet Corps for instructional purposes but minus certain mechanical parts and could not be fired;

One (1) to permit a machine gun to be given to the National Defence Museum; and

One (1) was issued to enable an arms manufacturing concern to retain samples of modern automatic firearms manufactured here during the last World War.

In all other applications for permits for this type of weapon, the weapons themselves were seized and turned over to the Royal Canadian Mounted Police, in accordance with the regulations.

In the enforcement of this regulation, we have worked in very close co-operation with the Royal Canadian Mounted Police.

INDUSTRIAL UNREST

Anaconda-American Brass Limited, New Toronto

On May 17th, 1946, local 811, a branch of The Mine, Mill and Smelter Workers' Union C.I.O. called a strike at the plant of the Anaconda-American Brass Limited, which affected approximately fourteen hundred employees.

After the walk-out, the plant ceased to operate and temporary office quarters were taken up by the company officials in the local hotel. The plant and offices of the company were picketed by the strikers at first in small numbers, and the municipal police force assigned a limited number of officers at the request of the plant officials to protect their property.

No incident of note occurred for some time, and the matter was treated as a purely local one. Attempts had been made by those interested to negotiate a satisfactory settlement, but these failed.

The company claimed that access to the office and plant premises of employees outside the bargaining unit was not a matter of negotiation. The union agreed to this principal, but with the proviso that a list of such personnel be supplied them in order that they could be checked off by pickets upon entering the offices. When this personnel attempted to pass the picket line, admission was refused them; whereupon the company applied to the municipal authorities for additional police protection, and when it was not forthcoming, the company brought the matter before members of the local council with the result that police assistance was officially applied for to the

Attorney-General. Conditions regarding the strike-bound plant had become progressively worse as the picket line had been greatly increased, which resulted in traffic tie-ups with instances of interference on the part of the strikers with the police.

Due to the fact that all available members of this Force were already on strike duty stationed at various points in the Province, only a few could be sent into New Toronto to augment the local force.

The strength of the force engaged was increased on June 27th, to a total of seventy-nine, all ranks, as they were withdrawn from the Seamens' Welland Ship Canal strike area. The union leaders greatly increased their picket lines and showed by their bearing a desire to challenge the authority of the police.

Before any action was taken by the police at the scene, the officers in charge consulted with the Union's International Organizer, and sought his co-operation in a verbal request to the strikers to disperse, which would leave a reasonable picket line to carry on. This request was ignored, even after he acknowledged that he was fully aware of the fact that by his refusal to assist the police he was placing the offenders in jeopardy. The police then ordered the strikers to disperse. A number refused to do so and force had to be used to carry out the lawful order. A melee occurred and when it subsided, four of the striking participants were taken into custody on charges of Obstruction. A large group of the strikers converged on the police automobile before it could be driven off, in an attempt to liberate the prisoners. Their action proved abortive but some property damage occurred to the police car. In due course the prisoners were admitted to bail. Subsequently the accused men had their trials before a magistrate, when two of the offenders were convicted, fined and costs levied.

After consultation with the crown attorney, the two union heads were charged with violation of Section 501 (f) of the Criminal Code, and after a lengthy trial covering several days, the trial magistrate convicted both men of Watching and Besetting, as provided for in the law, and the maximum fines were levied.

On or about October 28th, 1946, the management and employees arrived at what was considered a satisfactory settlement and the plant again was prepared, after five months complete shut-down, to continue production.

This permitted members of this Force to be returned to their regular duties.

In connection with the Anaconda-American strike, the decision rendered by Magistrate John E. Pritchard at New Toronto should be of considerable interest to Police Departments when dealing with future strikes or picketing.

Bernard Doherty, International Representative of the Union of Mine, Mill and Smelter Works, and Jack Stewart, President of the New Toronto Branch of the Union, were jointly charged "That they did at the town of New Toronto in the County of York, during the months of May and June in the year 1946, wrongfully and without lawful authority, with a view to compelling certain employees of the Anaconda-American Brass Limited, and others, to abstain from doing what they had a lawful right to do, namely to work for and carry on their employment with the Anaconda-American Brass Ltd., beset and watch the premises of the said Anaconda-American Brass Limited contrary to Section 501 (f) of the Criminal Code."

The case was tried summarily by the Magistrate who held:

(1) that it is a fundamental principle of the law that if picketing is conducted in a manner which creates an obstruction, unlawful assembly, violence or trespass, it is then being carried on "wrongfully and without lawful authority," and constitutes an offence under Section 501 of the Criminal Code.

(2) that the actions of the accused extended far beyond the mere act of obtaining or communicating information permitted under Section 501 (g), and were therefore wrongful and without lawful authority and a violation of Section 501 (f), and found upon the evidence that the charge against both of the accused had been proven beyond any reasonable doubt and registered a conviction. Both defendants were fined $100.00 and costs or three months imprisonment in default.

Seamen's Strike-Vessels Sailing on Waters of the Great Lakes

On May 25th, 1946, when the steamer "Noronic," a Canadian registered vessel engaged in passenger and freight traffic on the Great Lakes docked in the Welland Ship Canal, Thorold Township, Welland County, carrying some 440 passengers, bound from Prescott, Ontario, to Cleveland, Ohio, the ship's crew, (Members of the Canadian Seamens' International Union T.L.C.) left the ship in accordance with the union's instructions that a strike had been called. The union installed a picket line on the shore.

The captain of the "Noronic" two days later laid charges and warrants were issued by the local county authorities against thirty members of the crew for neglect of duty and being absent without leave under the provisions of the Canada Shipping Act.

Certain unlawful acts were committed, and the ship owners complained to the police authorities, and requested protection for their personnel and property. Thorold Township Police executed the warrants on the erring crew members without further violence, but rumors spread, picket lines were greatly reinforced and the pickets armed themselves with staves, and took on a belligerent attitude. As time progressed, numerous other large freighters passing through the Welland Canal experienced similar action on the part of their crews leaving their ships as soon as the ships docked. Tents were erected and the striking crews practically controlled the Canal system.

The ship owners became alarmed at the show of force and asked for greatly increased police protection as they were fearful of their property in its present unprotected condition. They also proposed replacing some of the striking crews on vessels carrying urgent freight loads. This action might precipitate more violence and result in bloodshed or serious damage to their property. The township of Thorold could not supply the required police protection and this was made known to the Attorney-General through the elected township head.

As a result, a detachment of fifty-three officers and men of this Force, drawn from adjacent territory was ordered to the Welland Canal to render assistance to the local police authority, should the circumstances warrant.

Numerous other crews from lake-going vessels of Canadian registry upon docking in the Canal zone left their ships and joined in the strike movement, thus producing a serious state of congestion of both ships and striking seamen, which left the ship owners faced with problems they were unable to handle. Members of this Force assisted by a detachment of Royal Canadian Mounted Police were called upon to police the banks of the Canal system and its numerous locks connecting Lake Erie and Lake Ontario, a distance of approximately twenty-three miles. This problem required a greatly increased police personnel in order to render adequate protection for the stranded laden vessels that were blocking the Canal.

The strike action daily grew in proportions and gradually it affected hundreds of vessels and their crews engaged in the movement of goods on the Great Lakes. The police forces involved had to reinforce their numbers on the Welland Ship Canal until a maximum of one hundred and forty-two members of the Ontario Provincial Police and fifty-two members of the R.C.M. Police concentrated at that point. However, the deportment of the strikers in general was good and little property damage was done.

On June 24th, 1946, a federally appointed Controller of Ships took over the movement of vessels tied up in the Canal and events developed satisfactorily between the union and the ship owners to such an extent that crews could be placed aboard and the ships got under way. The following day, June 25th, shipping conditions resumed normalcy in the Welland Ship Canal and the Ontario Provincial Police and the R.C.M.P. contingents from that area were ordered out and they resumed their respective duties at other points.

Reports from many Canadian ports showed that the strike action taken by the Canadian seamen affected the whole of the Great Lakes. Sporadic skirmishes between pickets and the police took place but these were principally confined to minor infractions of the law, with the exception of an incident reported in the St. Lawrence Canal Waterways, Cornwall Division. On June 3rd, 1946, the ships, the City of Windsor, and the City of Hamilton, eastbound, passing through Lock Number 21, were boarded by about a dozen striking seamen who seized the ships' emergency axes, did considerable damage and then let the anchors go, thereby endangering all shipping in the Canal.

At the time, a detachment of forty-three officers and men of the R.C.M. Police were performing guard duty on the locks situated in Cornwall Township. The ship owners were incensed at what they determined was inadequate police action and complaints were lodged with the local authorities, the Board of Commissioners of Police for Cornwall and the Township of Cornwall wherein the incidents occurred. As a result, on June 4th, 1946, the city of Cornwall Board of Police Commissioners made written application to the Attorney-General of Ontario for police reinforcements for strike duty in their city. On the same date a contingent of sixty-three members of the Ontario Provincial Police moved into the Cornwall area to supplement the R.C.M.P. detachment and the municipal forces.

Prior to the arrival of the Ontario Provincial Police to the strike area, the municipal police in Cornwall Township clashed with a group of men who had evidently been engaged by some person in Montreal to act as strike-breakers. They had attacked and injured a number of the striking seamen who had to be hospitalized as wounds had been inflicted by the Montreal culprits who were armed with weapons of various types selected for the affray.

As is the case of the Welland Ship Canal, the Dominion Government nominated a Controller of Ships, whose duty it was to arrange for the movement of vessels within the Canal. The police worked in co-operation with this official. On or about June 23rd, 1946, the union representatives and the ship owners arrived at a compromise settlement and the stranded vessels got under way. On June 24th, all members of the police forces were withdrawn and returned to their regular duties.

This Seamens' Strike proved to be one of the most costly disputes experienced in the industrial history of Canada.

The following occurrence resulting from the Seamens' Strike is worthy of note:

On June 20th, 1946, a report was received at District Headquarters, Niagara Falls, that a man had been taken to the Welland County Hospital in a serious condition as the result of having been badly beaten.

On investigation it was found that the man was one Alexander Morrison of Toronto, an agent of the Pinkerton Detective Agency, and that whilst in the lobby of the Colonial Hotel, Port Colborne, he had been forcibly seized by four men, carried to an automobile, taken out into the country, stripped, robbed, beaten up and abandoned.

From information obtained, six men were eventually arrested. All were connected with the Seamens' Union, to wit: John Thompson of Toronto; Mike Ganyk, no fixed abode; Ray Tessier, Toronto; Joe Grabbich; Harry Davis; and Marcel Lavoir, all of Montreal.

All were charged Robbery with Violence under Section 445 of the Criminal Code.

Thompson, Tessier, Grabbich, and Davis pleaded not guilty and were committed for trial. They appeared before Judge Fuller at Welland on December 6th, 1946, with the following results:

John Thompson—convicted and sentenced to three years in Kingston Penitentiary,

Mike Ganyk—absconded while on bail and has not been tried yet,

Ray Tessier—charge dismissed,

Joseph Grabbich—charge dismissed,

Harry Davis—(Vice-President, C.S.U.) charge withdrawn,

Marcel Lavoir—pleaded guilty before the magistrate as charged and sentenced to six months in Ontario Reformatory.

Seizing and Confining of F. Neilson, Thunder Bay District

This case was somewhat unusual and also arose during the strike of the Canadian Seamens' Union. John Hicks, one of the strikers was appointed captain of the pickets at Jackfish, Ontario. Apparently on the instructions of Cyril E. Lenton, Treasurer of the Canadian Seamens' Union, he detained one Frank Neilson, an employee of the Colonial Steamships.

When Hicks was interviewed at Jackfish on June 2nd, and questioned as to his reason for detaining Neilson, he produced a telegram purporting to have been received from Cyril E. Lenton, Treasurer, Canadian Seamens' Union, Fort William, in which Hicks was instructed to "hold official," and "congratulating him on his good work." This matter was discussed with Mr. P. V. Ibbetson, Crown Attorney, Port Arthur, who issued instructions to lay charges against both Lenton and Hicks under Section 297 (b) Criminal Code. Warrants were issued and both men arrested and later released on bail of $1,000.00. The case finally came to trial before District Judge T. M. Mulligan, Port Arthur, on November 14th, and the following verdicts returned:

Both prisoners found "not guilty" conspiring to hold Frank Neilson, Section 573 Criminal Code;

Both prisoners found "not guilty" conspiring to hold officer, S.S. Kenora, Section 573 Criminal Code;

Both prisoners found "guilty" of Seizing and Confining Frank Neilson, Section 297 (b), (c) Criminal Code;

Both prisoners found "guilty" of Intimidation, Section 501 Criminal Code.

On November 21st, 1946, both Lenton and Hicks were sentenced to serve three months in the common Gaol under Section 297 (b) Criminal Code, and one hundred dollars and costs under Section 501 Criminal Code, or in default three months in common Gaol.

Strike, Steel Company of Canada Limited—Hamilton

On July 14th, 1946, the Union representatives of the Steel Company of Canada Limited, affiliated with the United Steel Workers of America, C.C.L., C.I.O., called a strike at the plant located in the City of Hamilton, Wentworth County, whilst Mr. Justice W. D. Roach was sitting on a Board of Inquiry mediating the wage dispute between the Steel Companies and the Steel Workers' Union.

As a means of continuing the operation of the companies in the essential work of producing steel, pending a settlement of the dispute, the Federal Government appointed Mr. F. B. Kilbourn and three Deputies to operate the mills. The Order-in-Council directed all employees to continue to perform their duties. Notwithstanding this Order, the National Advisory Committee of the union ordered a strike. However, approximately twenty-five hundred men chose to remain at their jobs in the Hamilton plant of the Steel Company.

Those charged with law enforcement in the strike-bound area avoided taking any action that might embroil the police in the dispute. The strikers set up a picket line at the plant, and the local chief constable assigned members of his force for duty at the scene. Some of the workmen that remained at their jobs soon complained they had been attacked and beaten on the streets enroute after visiting their families.

Reports of clashes between strikers and non-strikers in and about the waters of Hamilton Bay were received. Those situated outside of local police jurisdiction were investigated by members of this Force attached to Hamilton Headquarters.

This strike with its contributing incidents produced a condition of great fear on the populace, and the issue was debated in meetings held by the city council. Resolutions by that body were passed which brought the matter before the Board of Commissioners of Police. This Board held an enquiry which terminated in an appeal to The Attorney-General for adequate police assistance to maintain law and order.

On August 26th, 1946, a company of two hundrd and twenty-five officers and men from the ranks of the R.C.M. Police, along with two hundred and fourteen officers and men from the Ontario Provincial Police arrived at Hamilton to render assistance to that city's municipal police force. The R.C.M.P. detachments' billets were in the Army Trades School on Kennilworth Avenue, and the Ontario Provincial Police detachments were quartered in the Navy barracks, H.M.C.S. "Star," for a period of some forty days.

The auxiliary forces assisted the municipal force in maintaining order and preventing violence.

Fortunately for all concerned, no serious clashes between strikers and police took place after the arrival of the police reinforcements. On or about October 4th, 1946, strike action was concluded and the members of this Force returned to their regular duties.

Bushmen's Strike, Thunder Bay and Cochrane Districts

On October 12th, 1946, the Lumber and Sawmill Workers' Union, Local Nos. 2786 and 2995 (affiliated with the parent union—the American Federation of Labour) called for strike action in the bush areas of Thunder Bay and Cochrane Districts located in the northern sections of Ontario, after negotiations between union members and timber mill operators failed at Port Arthur. However, a walk-out did not actually take place until after further attempts were made by The Honourable Charles Daly, Minister of Labour, to negotiate between union representatives and the bush and mill employers, without satisfactory results.

A mass picket line of approximately seventy-five strikers and their sympathizers concentrated their attention in the vicinity of the Feldman Saw Mill and by their actions indicated an intent to violate the law. On October 16th, 1946, a detachment of sixty members from this Force arrived at Timmins for strike duty in the Cochrane District. Twenty-eight members were stationed at Timmins, twenty-four were sent to Hearst and eight were stationed at Connaught.

On October 20th, 1946, approximately one hundred and twenty-five strikers left Hearst in four trucks, and visited four different bush camps which covered a radius of forty miles. They endeavoured to persuade the workers engaged there to come out on strike. Members of this Force were present and the strikers object was not accomplished.

Non-union personnel was obtained and passed through the picket lines. This action was resented by the strikers and instructions were given to organize a raid on Feldman's Mill to destroy the sawing machinery. On the night of October 21st, a gang of strikers set about to accomplish this. They succeeded in eluding the police on duty at the scene but were discovered before they could carry out their mission. Nine men were arrested and four were held as material witnesses. Leo Barrette, a strike leader, was arrested and charged with Counseling, contrary to Section 69 (d) of the Criminal Code. He appeared in the Magistrate's court, November 5th, 1946, pleaded guilty to the charge and was fined $50.00 and costs.

On October 24th, 1946, a group of thirty-nine strikers raided a bush camp operated by the Driftwood Lumber Company and forcibly compelled workers to leave their work. Three leaders of the gang were arrested and charged under Section 501 and its subsections of the Criminal Code. On November 12th, 1946, they were convicted in Magistrate's court at Hearst and fined various amounts up to $50.00 and costs.

Several strikers were arrested and charged with "Intimidation," under Section 501 (a) (b) and (c) of the Criminal Code. These charges were disposed of in the Magistrate's court in Hearst on November 12th, 1946, at which time all the accused men were convicted as charged and fined amounts as high as $50.00 and costs.

On October 23rd, 1946, forty strikers from Hearst went to the Driftwood Lands and Timber Companies (Camp Number 3) in Staunton Township, Cochrane District, and stopped fifteen men engaged in work in the employ of this company by the use of threats of personal violence. The strikers took over possession of the camp's office preventing the camp clerk from using the telephone communication with the outside, the line having been cut in several places. The strikers then invaded the dining room at the camp and consumed food which had been prepared for the workers. The Police arrested three of the leaders on charges of Intimidation, based on Section 501 of the Criminal Code. They were convicted before a Magistrate at Hearst on November 12th, 1946, and fined amounts in excess of $50.00.

In the Thunder Bay District, fifteen Timber Companies employing over 4,000 employees in bush operations, pulpwood cutting and its products, were engaged throughout a wide and difficult area having regard to terrain and transportation facilities. Some of the more isolated regions could only be reached in an emergency by plane. This service was arranged for by an agreement with the Department of Forestry officials.

A total of forty-one officers and men were assigned to strike duty in the Thunder Bay area on October 17th, 1946. This entailed heavy expense as the reinforcements had to be drawn from southern sections of the Province at a time when their services were required on regular detachment duties.

On or about October 15th, 1946, approximately four hundred striking bushmen congregated in the municipality of Geraldton where meetings were held in the Finnish Hall daily. The exterior of the hall was decorated with a large picture of Premier Josef Stalin of Russia.

On October 17th, striking bushmen became very aggressive north of the village of Hurkett in the vicinity of the Great Lakes Paper Company camps by erecting on the roadway of the company an improvised gateway, thus causing all vehicular traffic to stop. Twelve pickets at this barrier would interrogate the travellers and inspect their baggage before they allowed them to proceed. Some persons thus treated included visiting citizens from the United States, bent on a deer hunting expedition in Ontario. Members of the Force investigated the incident and had the barrier removed with a warning to the erring strikers.

On the night of October 30th, 1946, approximately eighty strikers riding in trucks arrived at Nowatin River where the Great Lakes Paper Company had men working on their bush limits. Early the following morning a large group of pickets entered the Company's mess hall and other buildings on the property and told the workers that they had only ten minutes to leave the camp. It was found that Walter Haywood of Winnipeg, a leading union man, was in charge of the pickets but no evidence was forthcoming from the disturbed workers to warrant any arrests. The workers, on the advice of the police, returned to the camp when transportation was provided.

Members of the Force avoided taking any action not considered proper and when in doubt consulted the local Crown attorney for legal opinion. This unbiased attitude on the part of the police did not pass unnoticed by the union representatives and the strikers, as comments to this effect were voiced afterwards to our men.

CRIMINAL INVESTIGATION BRANCH

This Branch has been actively and continuously employed in the many lines of investigation undertaken by them, including such contrasting subjects as the investigation of applicants for licenses under the Unwrought Metals Act, the Private Detective Act, the Administration of Municipal Police forces, various matters on behalf or in co-operation with other government departments and all cases of Criminal Investigation including many of the major crimes occurring through the Province.

Appended hereunder are some of the more important cases which were investigated during the year:

Murders

In addition to new occurrences reported and investigated, a number of cases reported in 1945 were continued and disposed of.

Sergeant Hugh B. Price, Windsor, August 18th, 1945

This was one of three murders which occurred in Windsor during the month of August, 1945. All three murders were reviewed in the report submitted for that year by reason of the fact that an officer was detailed from the Criminal Investigation Branch to assist the Windsor City Police in the investigation, which, at the time, failed to lead to the murderer.

However, in June, 1946, two similar attempted murders occurred in Windsor, the victims being Joseph Gelenger and Alexander Voligny, both of Windsor. Investigation of these later crimes led to the arrest of a young man named Ronald George Sears, Windsor. All of the circumstances and evidence indicated that Sears was responsible for these five crimes.

Sears was tried, in the first instance, with the murder of Sergeant Hugh B. Price, and was convicted and sentenced to be hanged. This conviction was quashed in the Court of Appeal.

The situation to date is that Sears is still in custody awaiting disposition of the other murder charges on which he stands indicted, and they have been traversed to the May Assizes.

Mrs. Audrey Lyons, Ajax, November 10th, 1945

This case was reported in the 1945 Annual Report. Lorne C. Harris, charged with the murder of Mrs. Audrey Lyons, appeared for trial at Whitby at the March Assizes, 1946, was found guilty and sentenced to be hanged on May 28th, 1946.

The Court of Appeal granted a new trial which took place in September, 1946, at which time Harris was acquitted.

John Dubinsky, South Porcupine, November 23rd, 1945

Marcell Desserres was convicted of this murder at the Cochrane Assizes in April, 1946. He was sentenced to be hanged on July 9th, 1946.

The Court of Appeal granted a new trial, which commenced in October, 1946. The trial proceeded for several days, when the accused was taken ill. He was later certified to be unfit to instruct counsel, and is at present under detention in a mental hospital.

Russell Gammon, Essex County, December 31st, 1945

Charles Kennedy, charged with this murder, appeared for trial at Sandwich in May, 1946, and was found not guilty.

Theresa DeCourcy, Sault Ste. Marie, October 19th, 1945

This brutal murder which was reported in last years Annual Report has been the subject of continued investigation. Numerous suspects have been interrogated and every clue followed to its conclusion, but so far sufficient evidence has not been obtained to place any person on trial.

Walter A. Lavallee, Saugeen Indian Reserve

Private Walter A. Lavallee, a soldier who had just returned from overseas on January 4th, 1946, was shot at the home of his mother-in-law, Mrs. Davis Besito, on the Saugeen Indian Reserve near Southampton, on January 6th, 1946.

Lavalee was sitting on a chesterfield in the living room of the house, when a shot rang out, and he died almost instantly. The bullet had been fired through a window in the living room.

Investigation disclosed that one Neil Nashkawa, age 23, Saugeen Indian Reserve, had been seeing Mrs. Lavallee, wife of the deceased, during Lavallee's absence overseas, and Mrs. Lavallee admitted that she and Nashkawa had been intimate during that period.

Two .43 calibre Mauser rifle bullets were found in Nashkawa's shack, and a rifle of the same calibre was found against a fence post near the shack. A pair of goloshes were also found, hidden under a stone. These had been patched, and were identified as being the property of Nashkawa. They were identical in size and tread with prints found in the mud outside the house in which Lavallee had been killed. It was established that the rifle had been in Nashkawa's possession, and had been loaned to him by the registered owner.

Nashkawa was charged with murder and tried at Walkerton in March, 1946. He was found guilty and sentenced to be hanged on June 5th, 1946, which sentence was duly carried out.

Mrs. Mary E. Pillsworth, Brampton, Peel County

On January 13th, 1946, Mrs. Mary Ellen Pillsworth, age 29, of Brampton, died at Toronto General Hospital as a result of head injuries sustained during the evening of January 12th, at her home in Brampton. There was no sign of a struggle in the house when the injured woman was found, and so far as could be ascertained, nothing had been taken from the house.

Elbert C. Pillsworth, husband of the deceased, who operates an electrical goods store in Brampton, received a telephone call at his store shortly after 10 p.m., on January 12th, 1946, from the local telephone exchange, advising him that they had a call from his house, but were unable to make out what the party was saying. Pillsworth hurried home to find his wife lying on the floor, holding the telephone in her hand. She had been brutally beaten about the head, and died the following day without regaining consciousness.

An intensive investigation was conducted, and a reward of $1,000.00 was posted, but to date there has been no solution of this crime.

Joseph and John Fitzmaurice, Renfrew County

On February 1st, 1946, brothers Joseph A. and John E. Fitzmaurice, Admaston Township, Renfrew County, were shot and killed by Thomas Gibbons, a neighbour. Leslie McNulty was an eyewitness to the shooting.

Thomas Gibbons admitted that he had shot the brothers when they attempted to drive over a road running through his property. Apparently ill-feeling had existed for some time between Gibbons and the Fitzmaurice brothers over the right-of-way on this road.

On March 18th, 1946, Gibbons trial commenced and he was found guilty of murder and sentenced to be hanged on June 11th, 1946.

The Court of appeal reviewed this judgement in May and ordered a new trial, which commenced on November 4th, 1946. After some deliberation, the jury found that Gibbons was sane and was fit to stand trial. Counsel for the accused then advised that one of his most important witnesses, a sister of the accused, was ill and could not attend court, and the trial was ordered traversed to the 1947 Spring Assizes.

John Orrange, Strathroy, Middlesex County

Harry Short was arrested at Strathroy, February 10th, 1946, and charged with the murder of John Orrange on Februay 11th, 1946. It was alleged that shortly after midnight on February 10th, 1946, the accused had caught John Orrange in the act of window peeping. Orrange was terribly beaten about the head and was found dead on the floor of Short's home when police arrived. The accused appeared at London before Mr. Justice MacKay and Jury and was found not guilty on March 20th, 1946.

John Dick, Hamilton, Wentworth County

On March 16th, 1946, a male torso, clothed only in a suit of combination underwear, was found on the Mountain Scenic Drive near Hamilton. The arms, legs and head had been sawn off and the stomach partly sawn through. On March 19th, the torso was identified by John Wall of Beamsville, as the remains of his brother-in-law, John Dick, age 39, who had been missing from his boarding house in Hamilton since March 6th. Deceased was a Russian-Mennonite, employed as a street car conductor with the Hamilton Street Railway Company.

It was learned that Dick had an appointment with his wife, Evelyn Dick, on March 6th, the day he disappeared, and on March 19th, Evelyn Dick was taken into custody and questioned. She immediately denied having any knowledge of her husband's death. Her premises were searched and a watch and chain, money changer, street car ticket box, street car tickets and uniform buttons were found, and all were identified as being the property of John Dick, and had been in his possession on the day he disappeared.

Evelyn Grant Dick married John Dick on October 4th, 1945, under the name of Evelyn White, a name she acquired in 1943 when she gave birth to the first of three illegitimate children. Evelyn and John Dick had separated some time prior to his death, owing to domestic trouble.

On March 26th, Evelyn Dick was formally charged with the murder of her husband, and several days later, William Bohozuk, a friend, was jointly charged with her on the murder count. Subsequently, Donald and Alexandra Maclean, parents of Evelyn Dick, were also charged with the murder of John Dick. At the preliminary hearing, all were committed for trial, and with the exception of Alexandra Maclean, who was charged as a material witness and released on bail.

A further search of Evelyn Dick's home revealed a locked suitcase in the attic which contained the mummified body of an infant about two weeks old. Evelyn Dick admitted that it was her last child, born in September, 1945, and she named William Bohozuk as the father of the child. She and Bohozuk were charged with the murder of the baby.

The trial of Evelyn Dick for the murder of her husband commenced at Hamilton on October 7th, 1946, and lasted until October 16th, 1946, when the jury returned a verdict of "guilty," and she was sentenced to be hanged on January 7th, 1947, which date was subsequently changed pending an appeal in this case.

The trial of William Bohozuk and Donald Maclean commenced on October 17th, 1946, and on October 21st, the Special Crown Prosecutor, T. J. Rigney, K.C., made a motion to have the jury withdrawn from the case, on the grounds that all the evidence was not available. The motion was granted and the trial of Bohozuk and Maclean was postponed until the next sitting of the Assize Court.

Joan Smith, Minaki, District of Kenora

On May 4th, 1946, the body of Joan Smith, age 3, was found about one hundred yards from her home at Minaki, District of Kenora. The child's head had been crushed and the body was nude, with the exception of a pyjama coat.

Joan's parents, Mr. and Mrs. Herbert Smith, Winnipeg, operate a summer resort at Minaki, and they had been spending the week end there when the daughter was killed.

The deceased and her baby brother had been placed in bed by their parents at seven o'clock, and the parents then left to visit a nearby family, leaving a hired girl with the two children. About eleven o'clock the same night, the parents returned and discovered that their daughter was missing from her bedroom. A search party discovered the child's battered body about an hour later. The hired girl stated that she had retired early in the evening, and had heard no disturbance.

An exhaustive investigation was conducted, and although several persons were under suspicion, no solution has been arrived at to date. A reward of $1,000.00 has been posted by the Province of Ontario, with the customary provisions.

Mrs. Leslie Hill, Muncey Indian Reserve, Middlesex County

Leslie Hill was arrested at Frome in Elgin County on May 13th, 1946, and charged under Section 263 Criminal Code for the murder of his wife, Kathlene Hill. The accused was committed for trial on May 21st, 1946, and came up for trial at London on Friday, September 25th, 1946, before Mr. Justice A. M. LeBel and jury, and on October 2nd, 1946, was found "not guilty" of Murder but "guilty" of Manslaughter. The accused was sentenced to serve ten years in Kingston Penitentiary.

Mrs. Ora Hannigan, Fruitland, Wentworth County

On May 22nd, 1946, the body of Mrs. Ora Ellen Hannigan, 69 year old widow and operator of a fruit market and service station near Fruitland, was found in the bedroom of her home. The victim lay on the floor, with her hands bound in front of her, and a workman's handkerchief tied tightly around her neck. Death had been caused by strangulation. The premises had been ransacked, apparently in search of money, and three empty purses were found on a bed.

To date, no one has been apprehended in connection with this murder. The Province of Ontario has posted a reward of $1,000.00, with the usual provisions for information leading to arrest in this case.

Daniel Tessier, Dalton Mills, District of Algoma

On June 4th, 1946, Daniel Tessier, age 34, left his home to travel to his trapping cabin at Jackpine River, about 8 or 9 miles away. He intended to return in a few hours time to resume work at the mill where he was employed. According to his wife's statement Tessier said before he left that if he failed to return the Provincial Police were to be notified. He took a .303 calibre rifle with him on this trip.

Tessier had been threatened the day preceding his disappearance by certain parties who believed that Tessier had given information to the Police, which had resulted in searches being made and charges laid under the Game and Fisheries Act. There had also been bitter feeling over trapping areas.

On June 12th, 1946, Tessier's body was found floating on Shakwamka Lake, about nine miles from his home. Death had been caused by a rifle bullet passing through his head.

Several persons were under suspicion in connection with this murder, but to date no charges have been laid.

Nora Shawanda, South Bay, Manitoulin Island

On Sunday, June 10th, 1946, at 9:15 a.m., Gore Bay Detachment received information regarding Mrs. Nora Shawanda who had been admitted to the Indian Hospital, Manitowaning, suffering from a severe beating, allegedly committed by her husband. On June 11th, 1946, Nora Shawanda died while being operated on under anesthetic for injuries received, subsequently, George Shawanda was charged with murder. On August 9th, 1946, he appeared before Magistrate W. F. Woodliffe at the village of Wekwemikong, Manitoulin Island, and was committed for trial on a charge of manslaughter.

On October 8th, 1946, George Shawanda appeared before Mr. Justice W. F. Schroder, Fall Assizes, Gore Bay, and after pleading not guilty through his Counsel, Mr. E. C. Facer, the grand jury brought in a verdict of no bill on the murder charge but a true bill on the manslaughter charge.

The charge of manslaughter was proceeded with and after three of the crown witnesses had testified, it was learned that the accused wished to plead guilty to a charge of assault occasioning actual bodily harm, Section 295 Criminal Code. This was accepted by the crown. George Shawanda was sentenced to the Ontario Reformatory, Guelph, to a term of eighteen months definite and three months indefinite.

Theresa and Patricia Laurie, Ajax, Ontario County

On June 16th, the bodies of Theresa Laurie and her four year old daughter, Patricia, of Ajax, were found on the highway near Ajax. The skulls of both had been battered into a pulp, apparently by a large stone which was found nearby.

Theresa Laurie had been going out with one George Bilton, recently released from Guelph Reformatory, where he had served a year's sentence for non-support of his wife and two children. He had visited Mrs. Laurie regularly, at her home when her husband had been absent at work. A search for

Bilton was made, and he was found sleeping in a car on a parking lot in Oshawa.

While being questioned by Police, Bilton submitted a statement written in pencil, in which he confessed having killed Mrs. Laurie and her daughter. The motive given by Bilton for the double slaying was that Mrs. Laurie wanted to go away with Bilton and live with him, and when he refused, she threatened to tell Police about a child born to her at Cobourg in March, 1946, naming Bilton as the father.

On September 24th, 1946, Bilton was convicted of the Murder of Mrs. Laurie and was sentenced to be hanged on December 10th. An appeal was made, but this was dismissed by unanimous decision of the Appeal Court, and Bilton was hanged at Ontario County Jail, Whitby, December 10th, 1946.

Louis Nato, Welland County

Louis Nato, age 55, an Italian living at Thorold, was robbed and assaulted early on June 17th, 1946. Nato related that he and Mrs. George Popovich, who had worked for him before her marriage in 1945, had arranged to go out on the night of June 16th, 1946. Mrs. Popovich told Nato that her husband would be working that night.

Nato and Elizabeth Popovich drove to a sideroad and parked there, and Nato was kissing the woman when the front door of the car was opened, and George Popovich appeared and threw a rope around Nato's neck. Nato's hands and feet were tied and he was robbed of approximately $185.00, keys and a wallet containing a cheque. The woman drove the car for a short distance, and while it was still moving, George Popovich threw Nato out of the car.

After regaining consciousness, Nato walked to Thorold and telephoned the Police.

On June 19th, 1946, Nato lapsed into a state of coma. He was transferred to the St. Catharines General Hospital, where he died several days later. George and Elizabeth Popovich were charged with murder and on September 12th, they were sentenced to be hanged.

An appeal was made in November but the Appeal Court unanimously upheld the conviction and dismissed the appeal. The sentence of the court was duly carried out on December 5th, 1946.

John and Lillian Brooke, Sandwich West, Essex County

On July 7th, 1946, John Brooke (Negro) was released from Kingston Penitentiary after serving a three year term. He returned to his home in the Township of Sandwich West where there was immediate and continuous domestic difficulties.

On the night of August 9th, 1946, he shot his wife Lillian with a shotgun and immediately turned the gun on himself. Both died instantaneously.

Richard Morgan, Kingston, Frontenac County

On July 8th, 1946, our Kingston Detachment investigated a complaint lodged by one Gerald Smith of Kingston Township respecting one Richard Morgan.

The officers arrived at the Smith residence at approximately 12:45 a.m., to be met by Smith running out of the house exclaiming, "I have fired a shot and I haven't heard any movement since," during which time he was frantically motioning toward a truck parked directly in front of the Smith house. Upon examination of this truck it was found that a man, later identified as one Richard Morgan, age 27 years, of Kingston, Ontario, was sitting in a slumped position behind the steering wheel of the vehicle. Closer examination revealed that Morgan was dead and a small hole was noticed in his shirt over the left shoulder. Coroner, Doctor M. J. Morrison of Kingston was called and after viewing the remains ordered the body removed. An autopsy was performed by Doctor W. D. Hay, a pathologist at Kingston, and a small bullet was removed from the body. Doctor Hay stated that the bullet, one of .22 calibre, had entered the left shoulder and travelled through to the right auricle of the heart. Death was due to this wound and internal bleeding.

Smith was immediately arrested and held on a nominal charge of vagrancy. An inspector of the Criminal Investigation Branch immediately proceeded to Kingston and assumed charge of the investigation.

On July 13th, 1946, on the instructions of Attorney T. J. Rignay, K.C., charges of murder and manslaughter, Sections 263 and 268 of the Criminal Code, were preferred against Smith.

On July 23rd, 1946, Gerald Smith appeared before Magistrate J. B. Garven at Kingston for a preliminary hearing at which time the charge of murder was laid over until the Fall Assizes.

On October 28th, 1946, the Grand Jury upon reviewing the evidence as offered in this case returned a true bill on the manslaughter count, Section 268 C. C. The trial proceeded before His Lordship Justice Barlow and lasted for two days. At the conclusion of the case and after the jury had deliberated for one and one half hours, they returned a verdict that Smith was guilty of manslaughter, and he was sentenced to serve three years in Kingston Penitentiary.

Henry Rondeau, Peche Island, Essex County

An unidentified body was found on Peche Island in the Detroit River near Windsor on July 28th, 1946. The man's skull and right jaw had been fractured. The body was subsequently identified as being that of Henry Rondeau, a resident of Detroit, Michigan.

An intensive investigation was conducted in Detroit and Windsor, but to date no one has been apprehended in connection with this murder. The Province of Ontario has posted a reward of one thousand dollars for information leading to the arrest in this case.

Mary Jane and Mary Elizabeth Lama, Stormont County

On August 16th, 1946, Mary Jane Lama and her daughter, Mary Elizabeth Lama, were stabbed to death in their home in Cornwall Township near Cornwall, Ontario. Evidence indicated that Mrs. Lama's husband, William Earl Lama, had committed the double murder, and a warrant for his arrest was sworn out. The accused went into hiding, and was not arrested until October 26th, 1946, by the Cornwall Township Police. Lama came to trial on the charge of murdering his wife, and was acquitted. The second charge was traversed to the next Assizes.

J. Eldon Meredith, Middlesex County

Lloyd Nicholas and Joseph French were arrested August 24th, 1946, at

Delhi, in possession of a loaded automatic pistol and a stolen car. Subsequent investigations led to charges under Section 263 Criminal Code, for the murder of one J. Eldon Meredith, who was found shot to death on the Muncey Indian Reserve. The accused men were committed for trial on September 9th, 1946. They came before Mr. Justice H. Barlow and jury on January 21st, 1947. Joseph French was discharged because of insufficient evidence and Lloyd Nicholas found guilty of Manslaughter and sentenced to serve two years less one day in the Ontario Reformatory.

Gerald Dusharm, Sharbot Lake, Frontenac County

On October 11th, 1946, when Gerald Dusharm, age 6, of Sharbot Lake, Ontario, failed to return home from school at his usual time his parents became alarmed and a search party was organized. The search was confined to the village of Sharbot Lake and its immediate vicinity. At 7:30 p.m., October 11th, 1946, the body of Gerald Dusharm was found floating face down in what is known as Briggs' Creek, three quarters of a mile from Sharbot Lake.

Coroner Doctor W. Whytock of Sharbot Lake in carrying out an examination of the body, revealed that the back part of the skull was actually pulverized along with numerous lacerations and bruises to the face and arms. There appeared to be no doubt that some blunt instrument had been used in this brutal assault.

Investigation revealed that Gerald Dusharm had left school at 2:45 p.m. on the date in question and had met up with one Ronald York, age 11, of Sharbot Lake. When last seen together, these boys had been playing near a cliff, adjacent to Briggs' Creek. York was seen to emerge from this area alone. When first questioned, the boy stoutly denied any knowledge of Gerald Dusharm. Nevertheless, Ronald York was taken into custody and removed to Kingston Detachment offices where he was again questioned.

At this time, Ronald York admitted to the investigating officers that he had met young Dusharm about 3:00 p.m., October 11th, and that they had adjourned to the vicinity of Briggs' Creek to play at which time a fight had started between them. Young York calmly admitted that he had struck the deceased over the head with a stone knocking him down on the floor of the C.N.R. bridge. At this point the deceased was bleeding profusely from the right side of his head. York then deliberately bent over the deceased and smashed his head time and time again, against the ties of the bridge. When no further movement was noticed on the part of the deceased, Ronald York then threw the body off the bridge into the creek, then calmly returned to the village to play with other children bragging about the man he had just killed. Ronald York was confined to the Psychopathic Ward of Kingston General Hospital under the supervision of the Children's Aid Society where he was examined by Doctor C. H. McCuaig, a Psychiatrist from the Ontario Hospital at Kingston. Doctor McCuaig's findings were that Ronald York was a menace to other children and although not grossly defective, was a borderline case, definitely knowing right from wrong. Crown Attorney T. J. Rigney, K.C., instructed that York be charged with Occasioning Actual Bodily Harm, Section 295 Criminal Code, and on December 10th, 1946, he appeared before Magistrate J. L. Lloyd in Sharbot Lake, was convicted and sentenced to the Ontario Boys Training School for an indefinite period.

Mr. and Mrs. Francis Steip, Wiarton, Grey County

On October 29th, 1946, the dead bodies of Francis Steip, age 74, and his wife, Sarah, age 65, were found in the wood shed of their home at Wiarton.

From investigation it would appear that Mrs. Steip, who had been a patient in Ontario hospitals on three occasions, was a very considerable burden and had asked on a number of occasions to be put out of the way, and, eventually her husband had shot her and then turned the rifle on himself. This theory was borne out by the position of the bodies and the rifle.

Mrs. Rita Taylor, Sarnia, Lambton County

On November 30th, 1946, Mrs. Rita Taylor, R.R. 3, Sarnia, was brutally beaten in her home, and died a few hours later in Sarnia General Hospital.

Her husband was arrested and charged with murder. This case is still proceeding.

Mrs. G. Jewitt, Leamington, Essex County

On December 6th, 1946, William Jewitt, age 17, of the town of Leamington, attacked his mother, Mrs. G. Jewitt, in their home, and severely beat her about the head with a claw hammer, which caused her death. He later went to a neighbour and informed the police of what he had done. The crown attorney instructed that a charge of murder be laid against Jewitt and instructions were issued to have him examined by a psychiatrist.

This case is unfinished.

Marion Rusnak, St. Catharines, Lincoln County

Marion Rusnak, age 9, of St. Catharines, was reported missing by her parents on December 23rd, 1946. The girl had left her home in the afternoon of December 23rd, to return some tins to a next-door neighbour, and to buy a bottle of milk at a nearby grocery store. The child returned the tins to the neighbour, Mrs. Lapiere, purchased the milk and returned to Mrs. Lapiere's home to pick up a Christmas present for her baby brother, a small white metal drum, which was wrapped in red and white tissue paper. The girl left Mrs. Lapiere's home, but failed to return to her own home.

Hundreds of citizens of St. Catharines joined in a search of the city and surrounding areas for some trace of the missing girl. Wrapping paper found on the Canadian Canners property, near the Rusnak home was identified by Mrs. Lapiere as the paper she had put around the drum that was given to Marion just prior to her disappearance.

On December 31st, 1946, the manager of the Canadian Canners plant reported to police that Sidney G. Chambers, watchman and furnaceman at the plant, had attempted to commit suicide in his room in the plant dormitory by turning on a gas stove in his room, and by cutting his wrists. He was removed to St. Catharines General Hospital, and later charged with attempted suicide.

While being questioned by police, Chambers admitted that he had taken the girl to his room on the day of her disappearance, killed her and disposed of her body in the furnace where he was employed.

This case is still proceeding.

Donald Hastings, Blenheim, County of Kent

Donald Hastings, a married man living at Rondeau, Kent County was stabbed with a butcher knife outside the Blenheim Hotel, Blenheim, Ontario, on December 24th, 1946, causing wounds from which he died.

Investigation showed there had been an altercation between Hastings and one Leo Duquette, age 28, inside the hotel where Duquette was alleged to have stabbed Hastings. Duquette was arrested and a charge of Murder has been preferred against him.

This case is still proceeding.

Attempted Murder of John Carey, Brant County

On July 21st, 1946, an investigation was conducted by our Brantford Detachment into the vicious attack and stabbing of John Carey by William Holder as a result of an argument between the two men. Holder was committed for trial and subsequently appeared for trial before Mr. Justice Keiler MacKay and jury. To try and justify his actions, Holder stated that he had been attacked by Carey and that he, (Holder) had acted in self defence. Holder was found guilty of the offence charged and was sentenced to life imprisonment. This sentence to life imprisonment can well be understood when one is acquainted with the long criminal record of serious crimes against Holder.

Holder was recently released from Kingston Penitentiary after serving a term of ten years on a charge of attempted murder of a taxi driver near Brantford in 1933. He escaped to the U.S.A. Twice he was arrested in the United States and twice he escaped as he was being returned to the border for deportation to Canada. Finally in 1936, he was arrested in the U.S.A. and returned to Brantford and on March 11th, 1937, was sentenced to ten years imprisonment. At the time of his arrest in the U.S.A. and his return to Canada for trial, he was alleged to be totally blind and his blindness was attributed to syphilis by doctors, with no chance of recovery of his sight. However, no chances were taken by the police officers and he was handcuffed when moved from place to place. The wisdom of this precaution was later proven when with his recent release from Kingston, he smashed his white cane over his knee and walked away from the prison with normal eyesight. In 1925, Holder attempted to shoot Provincial Constable B. Milligan, (now Corporal Milligan) who was stationed in Brantford at that time, as he was attempting to apprehend him on a charge of armed robbery.

Manslaughter

Ronald Parradine, Ontario County

Beverly Brown, 12 years of age, was indicted on a charge of manslaughter in connection with the shooting on December 27th, 1945, of Ronald Parradine, age 5 years. Brown was found unfit to instruct counsel, and the court ordered accused to be held in custody at the Ontario Hospital, Orillia.

Mrs. Ida Burnside, Parry Sound District

On October 20th, 1945, Mrs. Ida Burnside was fatally shot by a member of an armed posse who was searching for escaped prisoners from the local gaol.

Roy Land, together with Chief Constable Doolittle, of Parry Sound, were charged with manslaughter in connection with this matter, but were acquitted by a jury at an Assizes Court.

Motor Manslaughter

M. R. Stinchcombe, Kent County

Irregardless of the publicity and warnings issued to the public concerning the combination of drinking and driving, this type of auto accident does not appear to decrease. Residents of Kent County once again had this warning brought home to them. On January 7th, 1946, a bride and groom, Mr. and Mrs. M. R. Stinchcombe with three friends, left the scene of their wedding, Thamesville, Ontario, and drove via Number 2 Highway west to Louisville, where rounding a curve at high speed the car went out of control, struck a tree and rolled over several times causing the death of two, Mrs. Ann Simpson, age 27, and Carl Burke, age 34, and serious injuries to others. Police investigation revealed that reckless driving on a curve was the cause of the fatalities. M. R. Stinchcombe, the driver of the car, was charged with motor manslaughter, Section 268 of the Criminal Code and was committed for trial. On February 12th, 1946, in Supreme Court before the Honourable Mr. Justice Keiler MacKay, the Jury brought in a verdict of not guilty of manslaughter against the accused, Stinchcombe, but guilty of dangerous driving and he was sentenced to four months in the Ontario Reformatory.

Adelard Roy, Markstay

On March 25th, 1946, a report was received of a serious car accident on Number 17 Highway three miles west of Markstay. Investigation disclosed that while A. Demore and J. St. Michel, both of Hanmer, were attempting to change a left rear tire on a truck, parked on the extreme right hand side of the highway, they were struck by a car travelling in the opposite direction. This car failed to stop and both Demore and St. Michel received serious injury, and St. Michel died following his admission to hospital.

On March 29th, 1946, Adelard Roy of Markstay, owner and driver of the death car was arrested and charged with motor manslaughter. He appeared before Magistrate W. F. Woodliffe and was committed for trial.

On October 7th, 1946, Roy appeared at the Fall Assizes, Sudbury, before Mr. Justice J. L. Wilson, the charge being reduced from manslaughter to dangerous driving, Section 285(6) of the Criminal Code. He received a term of six months definite and three months indefinite in the Ontario Reformatory.

Death of A. A. McDonald, Alexandria Municipality

On October 17th, 1946, one Alexander Angus McDonald of Alexandria Municipality was reported as missing from his home since October 7th. On November 2nd, 1946, his body was found in an outhouse on the property of Joseph Benoit of Alexandria. Considerable investigation was made into this death as many ugly rumors were present that McDonald had been murdered. As a result, an inquest was held in order to clear up the air. The coroners jury brought in a verdict that death was due to suffocation or asphyxiation in the pit in an outhouse on the property of Joseph Benoit, Victoria Street, Alexandria. Witnesses who gave evidence of hearing shouts or cries for help on the night that McDonald was reported missing were severely criticized by the jury.

ARMED ROBBERY

Bank of Montreal, Blenheim Branch, Kent County

On August 23rd, 1945, two armed men held up the officers of this bank and stole $4,300.00 in currency.

Gerald Blackburn and Gail Hastings were convicted and sentenced to seven years each in the Penitentiary.

Royal Bank of Canada, Leaside Branch, York County

This bank was robbed of some $12,000.00 on September 26th, 1945. On May 1st, 1946, three men, Walter Mishko, John Liddle, and Victor Wazney were arrested and subsequently convicted on a charge of armed robbery. Each were sentenced to ten years in the Penitentiary.

Canadian Bank of Commerce, Selkirk Branch, Haldimand County

On May 31st, 1946, the Selkirk Branch of the Canadian Bank of Commerce was held up and robbed of $7,895.00 and $150.00 in bonds by three armed men who escaped in an auto bearing Quebec license plates.

Following investigations one of the men concerned, William Riddle (alias Liddle) was arrested at Orillia, and admitted being implicated in this robbery. When his place of abode was searched the following firearms were seized: one .22 calibre rifle; one shotgun; one .38 calibre Colt revolver, fully loaded; and one Luger .38 calibre pistol, fully loaded. On his person when arrested and searched were found a .32 calibre Savage Automatic pistol, fully loaded; nineteen new 2 dollar bills with serial numbers in sequence, and five dollars and forty cents in dimes, identified as stolen from the Bank of Commerce.

As he was wanted in Montreal for a prior holdup, Riddle was returned to that city for trial where he was sentenced to a term of fifteen years in the Penitentiary. He has not been returned to this Province for trial and his two confederates have not so far been apprehended.

Bank of Toronto, Carlisle Branch, Wentworth County

On May 23rd, 1946, three armed men entered the Bank of Toronto, Carlisle Branch, in the township of East Flamboro, County of Wentworth, held up the bank officials and escaped with approximately $750.00 in cash.

As a result of investigations by officers from Number 3 District Headquarters, Hamilton, three men, Victor Brain, Harry Aronas and Manuel Britstone were arrested and charged with robbery with violence.

They appeared for trial in County Judges Criminal Court, Hamilton, when Brain was sentenced to seven years in Kingston Penitentiary.

The charges against Britstone and Aronas were dismissed due to lack of sufficient identification.

Royal Bank of Canada, Embrum Branch, Russell County

On April 28th, 1946, the Royal Bank of Canada, Embrum, Russell County, was held up by two armed, masked men who broke into the residence of the Bank Manager, forcing him and his family into the bank. As the bank safe had a time lock, the bandits were unable to obtain any money. A very lengthy investigation was carried out but no satisfactory results obtained.

On August 16th, 1946, the same bank was held up and one James Mallette, taxi driver of Hull, Quebec, was accidentally shot by Joseph A. Clouties, Bank Manager, and seriously wounded. Constables from our various detachments of the District, and constables of the Ottawa City, Nepean township, and R.C.M.P. Police Departments were thrown in and a thorough search of all the countryside in the vicinity of Russell was made. Through the excellent efforts of all concerned one Thomas Ritchie was arrested. Ritchie was charged with armed robbery, aggravated assault and being in possession of an offensive weapon, to which he pleaded guilty. On August 26th, 1946, he appeared in Magistrates Court, L'Original for sentence, and was sentenced to twenty years on the charge of armed robbery, two years on the charge of aggravated assault, and five years for possession of an offensive weapon. The sentences of twenty years and five years are to run consecutively and the two years to run concurrent.

Provincial Branch of Canada, Tecumseh Branch, Essex County

A splendid example of public and police co-operation was witnessed in the swift apprehension of five persons subsequently charged with the marginally noted crime. On June 13th, 1946, in the town of Tecumseh, at 2:45 p.m., four employees and five customers of the Provincial Bank of Canada were suddenly confronted by three armed and masked bandits. From threats of violence, all were forced to lie down on the floor while the sum of $13,071.79 was stolen. The robbery was completed in five minutes and the bandits escaped in a stolen car which they had left at the rear of the bank with the motor running. The alarm attracted the attention of the local citizens, a few giving chase in their cars. One car was successful in following the bandit car, at 80 m.p.m., to its destination, Peltier Harbour on the Detroit River. Another car stopped enroute to advise the police the direction taken. In Peltier Harbour the car attracted attention by its speed and it was observed stopping at the river's edge where three men jumped out, met a woman, then altogether left in a boat in the general direction of Peche Island, which is a part of Sandwich East township. The bandit car was seen driven away by a fifth party. Provincial, Riverside and Windsor Police converged on the area, but the parties involved had disappeared. The Detroit River Patrol, U.S. Coast Guards and a scout plane searched up and down the river. Provincial and Windsor Police commandeered a boat, went to Peche Island and arrested Mrs. Helen Rainone, Clifford Renaud, John Zero and Donald Lowry. The four suspected persons were found near the boat which had left the mainland. All were well known characters. The clothing worn by the bandits and the money stolen from the bank was found buried in the sand of the beach near the scene of the arrests.

On July 17th, 1946, the three charged with the robbery were committed for trial by Magistrate J. A. Hanrahan. Following a true bill, Lowry, Zero and Renaud were arraigned in Supreme Court before the Honourable Justice Dalton Wells, on September 23rd, 1946, and pleaded not guilty. The evidence of circumstances and continuity which was unbroken from the time of the robbery and their arrest proved conclusive and the jury brought in a verdict of guilty. On October 3rd, 1946, all three accused were sentenced to ten years each in Kingston Penitentiary.

Bank of Nova Scotia, Markham Branch, York County

On the afternoon of January 19th, 1946, at approximately 4:30, while Provincial Constable J. W. Sheffield was patrolling number 8 Highway in Wentworth County, he overtook a car carrying two young men. Their actions aroused his suspicion and he followed them for about a half mile, then stopped and questioned them. Still suspicious, he searched their car finding a leather bag containing a considerable amount of silver money, a large amount of bonds, and two loaded revolvers behind the rear seat. The two youths were taken to District Headquarters at Hamilton, where they gave their names as Murray Lawrence, age 17, and Robert Lance, age 16, of Toronto. They were questioned and gave statements to the effect that on the previous night they had broken into the Bank of Nova Scotia, Markham, smashed their way into the vault and stole the money, bonds, jewellery and the two revolvers. A check was made and it was found that the money and bonds totalled $50,760.54. Later in the evening all the loot and the two prisoners were turned over to the York County Police, who were in charge of the investigation.

Imperial Bank, Bolton Branch, Peel County

In the early morning of January 27th, 1946, Leonard Gott, age 19, son of Cecil Gott, prominent farmer of Peel County, residing at Bolton, was returning to his home when he noticed an auto parked in front of the Imperial Bank Building, Bolton, with two men in it. He observed their movements and saw them enter the bank and carry some heavy object in the side door.

Gott turned in an alarm to the effect that he had seen two men in the bank attempting to open the vault with an acetylene orch.

A number of citizens, amongst them being Gott's father, armed themselves with firearms and surrounded the bank. When the bandits became aware they were discovered, they escaped through a cellar window and ran around the bank followed by Leonard Gott.

When they came into view, Cecil Gott, Leonard's father, thinking all three were bandits fired a shot which struck his son who fell, badly wounded.

His death took place in the Brampton Hospital, February 10th, 1946, fourteen days after he had been shot.

The search for the bandits was continued, and John Reynar and Stanley Thompson were later arrested. Both were charged with Breaking and Entering the Imperial Bank at Bolton with intent to commit an Indictable offence. They were found guilty and sentenced as follows: Reynar, six months determinate and twelve months indeterminate in the Ontario Reformatory; Thompson, age 17, was placed on suspended sentence for two years.

Imperial Bank, Fonthill Branch, Welland County

On February 11th, 1946, it was discovered that a theft of $1,600.00 had taken place at the Fonthill branch of the Imperial Bank. Suspicion centered on Wilfred Cooke, caretaker at the Bank, who was missing.

Cooke was arrested on April 30th, 1946, and charged with the theft. $200.00 of the stolen money was recovered.

At his trial he pleaded guilty and was sentenced to six months definite and twelve months indeterminate in the Ontario Reformatory.

Armed Robbery, Carlton County

On July 13th, 1946, Donald Laprade, a taxi driver, was held up and robbed by a passenger whom he was driving. The driver was tied up and placed in the back seat, the bandit taking over the driving of the car. A second bandit was picked up near Ottawa.

When the cab stopped at Brittania, the driver was able to get out of the car. In attempting to put him back into the car, the attention of the bandits was attracted; they abandoned the auto and took to the bush.

Combined police operation resulted in the arrest of Henry Ceretti and Nicholas Minnille of Ottawa. Both men were charged with armed robbery and kidnapping.

Ceretti pleaded guilty before the magistrate and was sentenced to five years in Kingston Penitentiary.

Minnille elected trial before a High Court. He was arraigned in the Supreme Court at Ottawa and was found guilty. He was sentenced to ten years with ten lashes on the armed robbery charge and seven years on the kidnapping charge.

Robbery with Violence, Thunder Bay District

On May 19th, 1946, Geraldton Detachment received a complaint to the effect that one Nestor Maki had been beaten up and robbed of some twenty-four dollars the night previous.

Investigating this case the constable arrested one Raymond O'Hare who was arraigned before Magistrate C. D. LeMay at the Magistrate's Court at Fort William on a count of robbery with violence, Section 446a, of the Criminal Code. The accused was found guilty on June 3rd, 1946, and was sentenced to a term of four years in the Stoney Mountain Penitentiary, Manitoba.

Robbery while Armed, Thunder Bay District

At about 5:00 a.m., Sunday, June 23rd, 1946, District Headquarters at Port Arthur received a telephone call to the effect that at about 2:30 on the same date, Frank Dixon, a taxi driver, had his throat slashed by a passenger when his destination was reached some six miles west of Fort William, in Neebing township. The driver fought off his assailant and managed to drive back to McKellar Hospital, Fort William, where some twenty stitches were required to close the wound.

Later investigation resulted in one Steve Oktaba being apprehended early the same afternoon. On the instructions of Mr. P. V. Ibbetson, Crown Attorney, a charge of wounding, under Section 273 of the Criminal Code was laid. On July 4th, 1946, Oktaba was arraigned before Magistrate C. D. LeMay in the Magistrate's Court at Fort William on a charge of wounding. The accused elected summary trial and entered a plea of guilty.

He was sentenced to serve ten years in the Stoney Mountain Penitentiary, Manitoba.

Robbery with Violence, Amherstburg, Essex County

On January 14th, 1946, while Miss Jane Bailey, cashier for the Mara Bread Company, Amherstburg, was on her way from the bakery to the bank with cash for deposit, she was knocked down and robbed of a receptacle containing approximately $1,600.00. The thief made his escape in an auto which had previously been stolen in Windsor. This auto was found abandoned in a bush outside the town shortly after the robbery.

On January 29th, 1946, Irvin Green and Robert Anderson were arrested at Toronto in possession of an auto stolen from Windsor. Green implicated Anderson in the robbery of the bakery cashier. When Anderson was questioned he admitted taking part in same but would not implicate anyone else.

Robert Anderson was charged with robbery with violence under Section 446a of the Criminal Code. He was found guilty and was sentenced to five years in the Penitentiary with five strokes of the strap.

Armed Robbery on No. 2 Highway, Essex County

On May 10th, 1946, Paul B. Croly, a salesman returning to his home in Chatham via Number 2 Highway, picked up three young men who hailed him for a ride. After proceeding about a mile, one of the passengers in the rear seat pointed a gun at Croly, ordered him to stop and then forcibly ejected him from his automobile.

The three young men drove away and after covering the greater part of Eastern Ontario were arrested in possession of the stolen car (and contents, value $550.00) at Gananoque.

They were identified as Arthur Barker, Harry Huot and Theodore Valentine, all of Windsor, and were charged with robbery with violence under Section 446a of the Criminal Code.

At their appearnce before the magistrate they pleaded guilty and were sentenced as follows: Harry Huot, four years in Kingston Penitentiary; Arthur Barker, four years in Kingston Penitentiary; Theodore Valentine, two years less a day determinate, and eighteen months indeterminate in Ontario Reformatory.

Armed Robbery, Bob-lo Excursion Company, Essex County

On July 7th, 1946, six employees of the Bob-Lo Excursion Company on Bob-Lo Island were held up by five armed and masked men. Two held the employees under guard while the remaining three forced open the safe and obtained $11,910.00 in Canadian and American currency.

They then cut all communications to the mainland and made their escape in two row boats.

This crime to date remains unsolved.

Armed Robbery, Riverside, Essex County

On November 26th, 1946, one of the boldest and most daring robberies in the annals of Essex County took place at the Edgewater Inn, operated by Mrs. Bertha Thomas in the town of Riverside.

On closing the Inn, Mrs. Thomas retired to her apartment and to bed.

Shortly after 5:00 a.m. she was awakened by a man entering her bedroom by means of a ladder at the window. The man was masked, armed, and was followed by two other men similarly equipped and disguised.

Mrs. Thomas was dragged from her bed, beaten, kicked, threatened, and forced to open the safe from which was stolen approximately $4,000.00 in Canadian and American currency.

After the robbery it was found the communication system had been rendered useless.

Suspicion rested upon one Angus Robinson, who was a well known local character. His place of abode was searched. The search revealed a quantity of silver and other items similar to what had been stolen. These were seized and a lookout kept for Robinson who was later arrested with Mike Kosowen and John Owad.

All were charged with armed robbery under Section 446a of the Criminal Code.

At their appearance before the magistrate in magistrate's court at Windsor, they elected trial before a High Court and were remanded, pending the appearance of the principal witness, Mrs. Thomas, still suffering from the ill treatment received at the time of the robbery.

Armed Robbery, Middlesex County

On August 20th, 1946, Floyd Mills and Lawrence McEachern were arrested on charges of having held up and robbed a taxi driver in the township of Westminster.

They appeared before the magistrate at the magistrate's court at London on August 23rd, 1946, where they were found guilty and sentenced to fifteen months determinate and three months indeterminate in the Ontario Reformatory.

Armed Robbery, Oxford County

On September 17th, 1946, Ross Dennis Whitney was arrested on three charges of armed robbery and three charges of theft of autos in Oxford and Middlesex counties.

Whitney was arraigned before the magistrate at the magistrate's court at Woodstock on October 2nd, 1946. He was found guilty and sentenced to terms totalling eleven years in Kingston Penitentiary.

Armed Robbery, Waterloo County

On January 19th, 1946, Rudolph Moskalik reported to the Kitchener detachment that he had been robbed by three armed men.

Joseph Kemple and Frank Helynchak were arrested and they implicated Fred Morgan in the robbery. Morgan was arrested at Los Angeles, returned to Canada and all three charged with the offence.

They appeared before the magistrate at the magistrate's court in Goderich on July 17th, 1946, when Morgan and Kemple were sentenced to three years each in Kingston Penitentiary. Helynchak, who had no previous record was placed on suspended sentence.

Armed Robbery, Sandwich East, Essex County

On July 13th, 1946, Wilfred Adams of 2440 Norman Road, Sandwich East township, who manages a poolroom in the city of Windsor, took a taxi to his home. He had at the time $7,907.00 on his person.

As the taxi drove into his driveway it was followed by another auto containing two armed and masked men, who held up Adams robbed him of the cash (carried in a money belt) and escaped.

Although it is almost certain who committed this robbery, sufficient evidence has not been obtained to warrant an arrest.

Assault, Being Armed with Intent to Rob, Lincoln County

On March 20th, 1946, Mrs. Gladys Darling while driving her auto to Niagara Falls, picked up a soldier near Burlington Beach to give him a lift. When near Homer, he held her up with a revolver and forced her to drive down a sideroad. Mrs. Darling, seeing a service station, drove to the station and screamed, attracting the attention of the attendants. The soldier, who was later identified as Private Joseph Kramer, jumped out of the auto and ran. The alarm was given and in a short time the accused was arrested at a cemetery on Number 8 Highway. When searched he was found to have a .38 calibre revolver on his person.

A charge of assault while armed, with intent to rob was laid. At Kramer's trial, he was found guilty and sentenced to two years in the Penitentiary.

Robbery while Armed, Haldimand County

On May 27th, 1946, two men, one armed with an automatic pistol, held up Clarke's Grocery Store, Caledonia, escaping with about $60.00 from the cash register.

It was learned that the men wanted for the robbery were travelling in a Plymouth car accompanied by another man and two girls. One man, Frank Owen, and the two girls, Marie Flell and Anne Zimba were arrested by the Hamilton City Police, and the two other men concerned were later arrested at Belleville. They were Alexander Carnegie and Lionel Zinger.

All three men appeared before magistrate's court at Cayuga on June 18th, 1946, and were sentenced as follows: Alexander Carnegie, charged armed robbery, eighteen months determinate and twelve months indeterminate; Lionel Zinger, two years less one day determinate and two years less one day indeterminate in the Ontario Reformatory.

Robbery with Violence, Frontenac County

On January 25th, 1946, while Robert McQuaker of Napanee was driving his auto from Kingston to Napanee, he gave a ride to two hitch hiking soldiers.

At a point about six miles from Kingston, McQuaker was assaulted by the soldiers who robbed him of his money, $64.00, and forcibly evicted him from his car and drove away with the auto.

As a result of a road block, the soldiers were arrested at Napanee still driving the McQuaker auto. They were identified as Gerald Morpaw and Eugene Tinbrell, both stationed at military camps in Kingston.

They were arraigned in magistrate's court at Kingston and charged with robbery with violence.

Gerald Morpaw was sentenced to two years in Kingston Penitentiary and Eugene Tinbrell was sentenced to fifteen months in the Ontario Reformatory.

Armed Robbery, Bradford, Simcoe County

On September 7th, 1946, two armed men walked into the Model Bakery, Bradford, held up the cashier, robbed the cash register of $150.00 and escaped on foot. The occupants of the bakery at the time of the holdup could give little or no description of the robbers, not even to the direction they went after the robbery. All enquiries so far have proved negative, and the occurrence is still under active investigation.

Armed Robbery, Parry Sound District

On October 24th, 1946, Samuel Devlin, Indian Agent of Parry Sound, while enroute to the Gibson Indian Reservation near Bala to pay treaty money to the Indians, was held up and robbed of $1,200.00 by two armed and masked men.

An old trick was employed in this case. An obstruction was placed across the roadway and when Mr. Devlin stopped his auto to remove same, two armed and masked men stepped out of the bush along the roadside, held him up, opened the car door and removed the brief case containing the money. The agent was then ordered to walk down the road and "keep on going."

It is believed that this robbery was carried out by Indians who knew Mr. Devlin's movements, but so far sufficient evidence has not been adduced to warrant an arrest.

Theft of Auto while Armed, Huron County

On April 27th, 1946, one Albert George Hodges of Windsor was found in possession of a stolen car near Exeter. Also in the car was a loaded revolver. Hodges was arrested and charged with being in possession of an unregistered weapon under Section 118 of the Criminal Code, also possession of a weapon dangerous to the public peace, Section 115 of the Criminal Code.

Hodges appeared before County Judge T. M. Costello and Jury at the General Sessions at Goderich on June 3rd, 1946, and was found guilty on both charges. He was sentenced to four years in Kingston Penitentiary on each charge, to run concurrent. Hodges had a previous record, having just been released previous to the above charges.

Breaking, Entering and Theft, Stormont County

On September 11th, 1946, the Grand River Golf and Country Club at Bridgeport was broken into and goods to the value of $345. taken therefrom. As a result, one John A. Mitchell was apprehended in Toronto on other charges, and later charged with this offence.

Mitchell appeared before Magistrate Thomas Elmore at Cornwall on December 6th, 1946, on several charges from outside points. He was sentenced to two years in Kingston Penitentiary to run concurrent with any other charges.

Breaking, Entering and Theft, Grey County

On April 3rd, 1946, the post office at Mildmay was broken into and the property stolen was later recovered at Walkerton. Two men, namely Peter Stasiuk and Norman Stolarski of Toronto were arrested in a stolen auto near Hanover and charged.

On April 30th, 1946, Stasiuk appeared before Magistrate O. McClevis at the magistrate's court at Walkerton on a charge of car theft from Hanover, and was sentenced to three years in Kingston Penitentiary, consecutive with a seven year sentence received at Cobourg, and two years concurrent. On the breaking, entering and theft of Mildmay post office, he was sentenced to twelve years in Kingston Penitentiary.

On May 1st, 1946, Norman Stolarski was arraigned before Judge G. W. Morley at Owen Sound, charged with car theft at Hanover, and was sentenced to two years in Kingston Penitentiary to run concurrent. On June 7th, 1946, he appeared before Magistrate O. McClevis at Walkerton on the breaking, entering and theft charge at Mildmay post office, and was sentenced to five years in Kingston Penitentiary, consecutive with other sentences of four years.

Breaking, Entering and Theft, Essex County

Because of a most unusual circumstance in the investigation of the marginally noted crime which resulted in the application of a rarely used Section of the Criminal Code, it is considered an interesting subject to mention. On January 15th, 1946, the post office at Cottam was discovered broken into and a safe containing $75.00 and papers was found missing. The safe was later recovered minus the money which could be identified by serial numbers. The "modus operandi" was suggestive of the work of a criminal by the name of Wilfred Laramie. When arrested at his home, Laramie was in possession of five bills amounting to $14.00, four of which could be identified. Laramie was taken to District Headquarters at Windsor for interrogation. At his request, for comparison, the money was laid on a desk before Laramie, who suddenly snatched it up and shoved it in his mouth. A struggle ensued but he defended himself long enough to swallow the money. He was taken to the hospital, but in accordance with his rights refused any medical assistance to recover it. The evidence was thus destroyed. There were two charges laid, one of breaking and entering, and the other under Section 180d of the Criminal Code, that he did unlawfully and wilfully attempt to defeat the course of justice by unlawfully destroying evidence of the commission of an offence. On February 21st, Laramie elected trial by a higher court and was committed thereto by Magistrate J. A. Hanrahan. On June 14th, having so elected, Laramie was arraigned before County Judge J. A. Gordon at Windsor and was found guilty and sentenced to six months in the Ontario Reformatory.

Breaking, Entering and Theft, Durham County

On April 14th, 1946, Gordon Brown of 1988 Dufferin Street, Toronto, reported to Bowmanville Detachment that his summer cottage situated in Cartwright township had been entered some time since March 1st, and a quantity of clothing and furniture stolen.

On May 7th, 1946, while the constable was carrying out some routine investigations, he had cause to interview one Fred Kendrick of Cartwright township at which time the investigating officer noted that Kendrick was wearing clothing similar to that reported stolen by Brown from his summer cottage. After a lengthy investigation, Kendrick was arrested, and charged in connection with Brown's complaint respecting his summer cottage. Kendrick's residence was searched and a quantity of stolen goods recovered. Further investigation revealed that some of the goods recovered had been stolen from a summer cottage in Cartwright township, also from a church in Toronto.

On May 14th, Fred Kendrick appeared before Magistrate E. A. Gee at Bowmanville and was convicted under Section 458 Criminal Code, and was sentenced to a term of five years in Kingston Penitentiary. Further charges as preferred against Kendrick by the Toronto City Police were also disposed of on that date.

Breaking, Entering and Theft, Frontenac County

On October 28th, 1946, a hunter's lodge at Plevna was broken into and seven hundred dollars in American currency, one .22 calibre rifle and one flashlight were stolen. The cottage was owned by Charles S. Teasdale. The Kingston detachment immediately commenced an investigation which resulted in one William Desabrais and his wife, Jean Desabrais, alleged to be from Ottawa, being apprehended. Both parties stated they were hitch hiking from Ottawa to Pembroke. When searched, the money and the flashlight were found, which Desabrais and his wife stated they had found along the roadside. In view of this evidence, Corporal Ramsbottom preferred a charge of housebreaking under Section 458 of the Criminal Code against each individual.

On November 5th, 1946, William and Jean Desabrais were arraigned before Magistrate J. L. Lloyd at Sharbot Lake and were convicted as charged. William Desabrais, an old offender, was sentenced to a term of three years in Kingston Penitentiary. Jean Desabrais, who had no previous record, was given suspended sentence.

Breaking, Entering and Theft, Elgin County

On May 11th, 1946, Trueman McCarey, and his two sons, Kenneth and Robert, were arrested at St. Thomas on numerous charges of house and shop breaking in Elgin County.

They appeared before the magistrate at the magistrate's court at St. Thomas on June 6th, where they were found guilty and sentenced as follows: Trueman McCarey, four years in the Penitentiary; Robert McCarey, two years less one day in Ontario Reformatory; Kenneth McCarey, two years suspended sentence.

BREAK, ENTRY AND THEFT FROM CREAMERIES IN CENTRAL ONTARIO

Hagersville, Haldimand County

During the night of June 21st, 1946, the creamery at Hagersville was broken into and butter and cash stolen.

As a result of combined police investigation, David Tucker and Louis Christopher were arrested and charged with this robbery. On Wednesday, September 18, 1946, they appeared in County Court at Cayuga and David Tucker was sentenced to four months in the county jail and Louis Christopher was given suspended sentence.

Brussels, Huron County

On January 16th, 1946, the creamery at Brussels was entered by burglars but owing to a burglar alarm sounding, they were disturbed before anything could be stolen.

An enquiry resulted in the arrest of Ross Kriks and Joseph Prokopsky of Toronto who were charged with breaking and entering with intent to rob. They were tried at the county judge's criminal court, Goderich, on May 12th, 1946, and were sentenced to two years each in Kingston Penitentiary.

Monkton, Perth County

On November 11th, 1946, the creamery owned by Stacey Bros. at Monkton was entered and the safe blown. Fortunately no valuables were obtained.

Later the same day Tony DiCessa and Harold Backner were arrested and charged with offences of safebreaking, also with breaking into the Canadian Bank of Commerce at Monkton

This case has not been completed.

Elmvale, Simcoe County

On the night of July 1st, 1946, an attempt was made to force the safe at the Elmvale Creamery without success. The thieves evidently were disturbed and in their getaway abandoned an auto which it was found, had been stolen in Hamilton.

Tottenham, Dufferin County

On the night of September 15th, 1946, an attempt was made to force the vault of the Tottenham Creamery by three men who were disturbed during their operation.

They escaped in a station wagon which had been stolen earlier the same night.

ARSON

Arson and Theft, District of Muskoka

On April 22nd, 1946, a report was received at the Huntsville detachment that an untenanted house owned by George Lovegrove in the township of Brunel had been destroyed by fire and that it was suspected the house had been stripped of household effects prior to being burned.

On investigation, considerable household goods and chattels were found in the bush nearby. Further enquiries resulted in the arrest of two men, Archie Baumhour and Alex Wood of Brunel township, who admitted having set the house on fire to cover the theft of the household effects.

On May 9th, 1946, Baumhour and Wood were arraigned before the magistrate at Bracebridge. They pleaded guilty to arson and were sentenced to three years in Kingston Penitentiary.

The apprehension of these two men solved a number of reports of breaking, entering and theft from summer residences in the Muskoka and Parry Sound Districts.

Wood was later convicted on six charges and Baumhour four charges of breaking, entering and theft and sentenced to an additional three years in the Penitentiary to run concurrent with the sentence for arson.

Arson and Theft, District of Muskoka

On June 10th, 1946, the summer home of Miss Margaret Waller of Newton, Mass., situated on Lake Rosseau near Windermere, Muskoka was destroyed by fire. The building and contents were valued at $7,500.00. At first, it was thought defective wiring or a grass fire was the cause of the fire.

Suspicion however, became centered around Claude Rosyski, who with his wife, were employed as hired help in the district. Roysk was arrested and charged with breaking into the Waller residence and stealing a radio, blankets, linen, comforters and other articles.

On July 4th, 1946, Royski was arraigned before the magistrate at Bracebridge. He was convicted and sentenced to three years in the Kingston Penitentiary.

In this case Royski followed the "modus operandi of Baumhour and Wood by destroying a home by fire in an attempt to cover up theft therefrom.

Fires in Residential Hotels, Muskoka District

Two private residential hotels in the District of Muskoka were destroyed by fire during the year.

On April 15th, 1946, the Riverview Hotel at Baysville was completely destroyed. This was a three story building with capacity for one hundred guests.

On July 17th, 1946 fire broke out at the Canadian Keswick Hotel, Ferndale, Muskoka, and despite the efforts of volunteer and Port Carling fire brigades, the building and contents was completely destroyed.

No loss of life was suffered in either occurrence and no evidence was obtained to indicate that the fires were other than accidental.

Bancroft Jail Break, Hastings County

On October 2nd, 1946, a Provincial Constable escorted Kenneth Holland, Royce Seymour and Charles Airhardt from the County Gaol at Belleville to the Bancroft lock-up in which village these three men were to appear the following morning on numerous charges of breaking, entering and theft.

Sometime during the night, the three men broke jail by forcing the lock on their cell door. Holland and Seymour immediately set upon the jail guard, an elderly man, one Frank Askey of Bancroft, after brutally assaulting him, robbed him of the sum of sixty-four dollars and fled. Airhardt, at this point, chose to remain in his cell where he was found the following morning.

A most efficient road block was organized which resulted in Holland and Seymour being apprehended at 10:45 p.m., on October 3rd, in the village of Apsley. They were accordingly charged with jail break and robbery with violence. On October 10th, the accused appeared before Magistrate J. L. Lloyd at Belleville and were convicted on all counts. Kenneth Holland on the charge of robbery with violence was sentenced to eight years in Kingston Penitentiary and a concurrent sentence of two years on the charge of Jail Break. Royce Seymour, on the charge of robbery with violence was sentenced to serve three years in Kingston Penitentiary and a concurrent sentence of two years on the charge of jail break. Charles Airhardt pleaded guilty to the charge of jail break and was allowed his freedom on two years suspended sentence. The crown offered no evidence on the charge of robbery with violence against Airhardt and the charge was dismissed.

Forgery, Hampton, Durham County

On November 8th, 1946, the Bowmanville detachment received a complaint from George Kerslake of Hampton to the effect that four cheques for the total amount of $160.00 had been marked to the debit of his account at a local bank in Bowmanville. Kerslake disclaimed any knowledge of issuing cheques for these amounts. Upon examination of the cheques in question, it was quite evident that they were the result of clever forgery. All cheques had been cashed by Bowmanville merchants, and had been tendred by an unknown man and woman.

The descriptions as furnished by the various merchants who had cashed these cheques tallied with the descriptions of an alleged married couple named Ernest J. Young and Mary Young whom Kerslake previously had in his employ. This couple had terminated their services with Kerslake on the date he was notified of the cheques being marked to his debit.

Ernest J. Young and Mary Young were arraigned before Magistrate E. A. Gee at the magistrate's court at Bowmanville and were accordingly convicted of all charges preferred against them under Section 467 of the Criminal Code. Mary Young was given two years suspended sentence on each of the three charges, such sentences to run concurrent. Ernest J. Young was sentenced to two years in Kingston Penitentiary on each charge, to run concurrent.

Highschool Principal, Coe Hill, Hastings County

On May 20th, 1946, the Provincial Constable of Bancroft detachment received a complaint to the effect that one Ralph Turner, Highschool Principal at Coe Hill was practicing indecent acts on young boys. As a result of this complaint a most diligent and thorough investigation was undertaken which resulted in the apprehension of Ralph Turner at Toronto on July 11th, 1946. Four charges of gross indecency, and one charge of indecent assault on a male were preferred against Turner.

On August 2nd, 1946, Turner appeared before Magistrate T. Y. Wills at Belleville and was committed for trial on these charges. On December 11th, 1946, Turner appeared before the General Sessions of the Peace for the county of Hastings presided over by His Honour Judge W. Lane of Picton. Convictions were registered on the four charges of gross indecency, and the following sentences handed down: (1st charge) 9 months definite and 9 months indeterminate in the Ontario Reformatory; (2nd charge) 18 months definite and 9 months indeterminate; (3rd charge) two years in Kingston Penitentiary; (4th charge) 9 months definite and 9 months indeterminate—such sentences to be served in the Ontario Reformatory at Guelph. All Reformatory sentences to run concurrent.

ANTI-GAMBLING BRANCH

Officers of this Branch were actively engaged in the suppression of disorderly houses, and convictions were registered against persons for keeping common bawdy, betting and gaming houses in the following municipalities: Blandford Township; Brampton; Brantford; Cardinal; Chatham; Dundas; Dysart Township; Eastview; East York Township; Etobicoke Township; Forest Hill Village; Fort Erie; Galt; Grantham Township; Hamilton; London Township; Newmarket; Ottawa; Paris; St. Catharines; Prescott; Preston; Sarnia; Simcoe; Stamford Township; Stratford; Thorold; Toronto Township and York Township.

A number of complaints and information have been received regarding the operation of disorderly houses at various locations in the Province. These were given prompt attention. The greater number of prosecutions instituted were the result of a systematic check being made by the officers of this Branch.

During the year, officers of this Branch worked in various municipalities throughout the Province where we are not primarily responsible for law enforcement, and have received the utmost co-operation from the Chief Constables and officers under their command.

On June 7th, 1946, a Search Order was executed at the residence of Albert Simpson (Shimkopsky) of 183 Montclair Ave., Forest Hill Village. In an upstairs bedroom (which was rented by Irving Denovitch, 63 Borden Street, Toronto, for $100. per month), bets were being recorded by Denovitch and Percy Sniderman of 223 Palmerston Avenue, Toronto. In this room were four unlisted telephones and among the papers seized was a complete record of bets recorded and the "pay off" sheet for Thursday, June 6th, which was as follows: $7,730.00 was found to have been wagered on 454 race horses and of that amount, $4,900.35 was shown as being returned to winning persons who had placed bets. The proprietor of the betting establishment stood to profit by the sum of $2,829.65 for one complete day's operation. Irving Denovitch and Percy Sniderman were jointly charged with keeping a common betting house, Section 229 of the Criminal code, also recording and registering bets on race horses, under Section 235d of the Criminal Code, and the trial proceeded by way of indictment. On the evidence submitted to the court, the charges against Percy Sniderman were dismissed. Irving Denovitch was found guilty on both charges and fined $300. or 90 days in gaol on the first count, $200 or 60 days in gaol on the second count, fines to run consecutive, gaol terms concurrent. The crown served notice of appeal on Irving Denovitch in connection with the sentences imposed as being inadequate. Mr. Justice Laidlaw presided over the court of appeal and sentenced Irving Denovitch to a term of three months in gaol in addition to the fine of $500.00.

In practically all prosecutions in connection with the charge keeping a common betting house, evidence was obtained showing that the telephone had been used as the medium for transmitting the bets from the premises where they were taken to some other location for the purpose of being recorded. In this connection, 35 telephones were seized, removed from the premises and returned to the Bell Telephone Company of Canada at the conclusion of the trial.

Officers of this Branch were on duty during the period May 18th, 1946, to August 23rd, 1946, at the following race tracks operating in the Province, for the purpose of suppressing bookmaking, in co-operation with the various Municipal Police Forces:

Ontario Jockey Club	Spring Meeting, Toronto. May 18th to May 25th, 1946.
Long Branch Jockey Club Limited	Spring Meeting, Toronto, June 5th to June 12th, 1946.
Metropolitan Racing Association of Canada Limited	Spring Meeting, Toronto, June 15th to June 23rd, 1946.
Hamilton Jockey Club Limited	First Summer Meeting, Hamilton, June 24th to July 1st, 1946.
Hamilton Jockey Club Limited	Second Summer Meeting, Hamilton, August 3rd to August 10th, 1946
Ascot Turf Club Limited	Fort Erie, Ontario, July 20th to August 1st, 1946.
Belleville Driving and Athletic Association Limited	Stamford Park, Stamford Township, Aug. 17th to Aug. 23rd, 1946.

Four slot machines, five electric "free play" slot machines, four pin ball machines and four combination pin ball and race horse machines were seized, a total of 17. These machines were found to have been used as gaming devices and were ordered by the presiding Magistrate to be confiscated and destroyed, and the monies found therein to be forfeited to the Crown for the public uses of Canada. Twenty machines were destroyed, three of which were carried forward from 1945.

Four hundred and forty-seven investigations were carried out during the year. Seventy-five orders to search and fourteen Search Warrants were executed. Seven summonses were served, and eighty-four persons were arrested without warrant. Fines to the amount of eleven thousand and eighty dollars were imposed as sentences and collected. Eight persons were sentenced to gaol for a total period of seventeen months and twenty-eight days.

The sum of two hundred and twenty-eight dollars and seventeen cents recovered from confiscated gaming devices; two hundred and twelve dollars and thirty-seven cents seized in gaming houses; and nine hundred and eighteen dollars and thirty-four cents seized in betting houses which was ordered forfeited to the Crown was turned over to the convicting Magistrates to be forwarded to the office of the Receiver General of Canada.

ANTI-GAMBLING BRANCH

Classified Return of Prosecutions, Convictions, Dismissals, Withdrawals, etc.

From January 1st to December 31st, 1946

OFFENCE	Prosecutions	Convictions	Dismissals	Withdrawals	Fines Imposed and Collected	Gaol Term Served
Common Bawdy House	2	1	1			3 mos.
Common Betting House	50	45	2	3	$6,400.00	7 mos. & 28 days
Common Gaming House	29	25	3	1	2,575.00	2 mos.
Recording & Registering Bets	2	1	1		300.00	3 mos.
Permitting Premises to be used for purposes of a Disorderly house	5	2	3		200.00	
Engage in Business of Occupation of Betting or Wagering	2	2			100.00	
Found Ins	107	100	7		1,475.00	
Inmates, Bawdy House	3	2	1		30.00	
TOTALS	200	178	18	4	$11,080.00	15 mos. 28 days

THE LIQUOR CONTROL ACT

There were 4,773 prosecutions by officers of the Ontario Provincial Police Force under the provisions of the Liquor Control Act of Ontario, for the period January 1st to December 31st, 1946, as follows: Convictions, 4,509; Dismissals, 110; Withdrawals, 154; Total, 4,773.

The fines imposed under the provisions of the Liquor Control Act of Ontario amount to approximately $91,793.00, the total amount being comprised as follows:

OFFENCES	Prosecutions	Convictions	Dismissals	Withdrawals	Fines
Having in Illegal Place	1,269	1,217	30	22	$17,446.50
Unlawful Purchase	20	19	.	1	1,095.00
Selling or Keeping for Sale	94	61	17	16	355.00
Unlawful Possession	430	396	9	25	26,265.00
Drinking in Public Place	422	412	3	7	4,549.00
Supplying to Minors	39	24	6	9	130.00
Illegal Use of Permits	187	156	4	27	9,385.00
Having or Consuming in Hotels	8	7	1	.	80.00
Intoxicated in Public Place	1,461	1,432	16	13	16,177.50
Permitting Drunkeness in Private Residence	21	19	1	1	590.00
Violations of Regulations 13, 15, 62a, b, 64b, 125, 126, 132, and 173	502	485	9	8	8,420.00
Found-Ins	96	90	1	5	1,060.00
Minors Applying for Permits	18	17	.	1	250.00
Miscellaneous	206	174	13	19	5,990.00
TOTALS	4,773	4,509	110	154	$91,793.00

CONFISCATED LIQUOR

The following amounts of spirits, wine and beer were seized and confiscated by the presiding magistrates and turned over to the Liquor Control Board: spirits, 600 gallons; beer, 6,100 gallons; wine 1,575 gallons.

CONFISCATED AUTOMOBILES

Under the provisions contained in the Liquor Control Act, the following automobiles were seized and conficated by the presiding magistrates, brought to Headquarters, and were sold by auction to the highest bidder. I may add that these cars were being used illegally by bootleggers for transporting liquor:

CONFISCATED CARS

	Value
No. 502—Terraplane Sedan	$333.90
No. 503—DeSoto Sedan	Returned to Owner
No. 504—Chevrolet Sedan	668.88
No. 505—Dodge Sedan	628.84
No. 506—Dodge Sedan	333.87
No. 507—Terraplane Sedan	545.92
No. 508—Cadillac Coupe	300.00
No. 509—Maple Leaf 2 Ton Truck	400.00
No. 510—Plymouth Coupe	481.54
Total	$3,692.95

REVENUE DERIVED FROM ENFORCEMENT OF THE LIQUOR CONTROL ACT, ONTARIO

	1946	1945
Fines Collected	$ 91,793.00	$ 88,306.50
Approximate value of Liquor Seized	25,000.00	28,000.00
Approximate value of Autos Confiscated	3,692.95	3,028.71
Totals	$120,485.95	$119,335.21

Disqualification of Premises

During the year, 150 certificates, restoring disqualified premises to private residences under Section 43 (2) of the Liquor Control Act were granted. Twenty-five applications for removal of the disqualification were refused.

Designation of Rooms as Private Residences in Hotels, Clubs and Tourist Camps

Approximately three hundred applications were received in 1946 from hotel proprietors, tourist camp operators and club managers for the privilege of having rooms designated in their premises as private living quarters. Only twelve of these applicants were refused this permission.

Liquor Permits Received for Cancellation

During the past year, there were 1,991 permits for liquor and reports on same received at this Branch from officers of the various Districts, and in each case where there were sufficient grounds to support a recommendation for the cancellation or a Prohibitory Board's Order being issued, the necessary action was taken and reports forwarded to the Liquor Control Board recommending cancellation.

Highway Traffic Act

Statistical information as supplied by the Registrar of Motor Vehicles, with comparative statements of the number of Vehicle Permits and Operators' Licnses issued for the years 1946 and 1945 respectively:

	1946	1945
Passenger Cars	585,604	555,460
Commercials	117,217	98,339
Two Purpose	1,303	1,279
Trailers	61,114	53,004
Motorcycles	6,982	5,745
Dealers	1,045	708
Operator's	683,105	637,020
Operator's (Motorcycles)	845	
Chauffeur's	403,495	334,832
Instruction Permits	109,130	81,928
In Transit Markers	11,707	2,998
Transfers	145,463	102,401

A conference was held at General Headquarters, Toronto December 9th to 11th, 1946, attended by Headquarters Staff, District Inspectors, Patrol Sergeants, and representatives of the Department of Highways, to discuss problems in connection with the enforcement of the Highway Traffic Act, and to devise additional ways and means of reducing the continuously mounting toll of accidents arising from the operation of motor vehicles on the highways.

That there is greater need than ever for intensified action, on the part of Police Departments, is proven by our records for the current year compared with the corresponding period for 1945. You will note a very considerable increase both in the number of accidents and fatalities that has been recorded.

Month	Total	Fatal	Number Killed	Number Injured
January	430	25	27	266
February	404	15	18	227
March	414	21	24	252
April	466	25	32	340
May	551	21	22	401
June	601	27	27	496
July	797	32	37	644
August	820	37	42	652
September	704	40	47	608
October	670	49	57	477
November	849	37	43	603
December	781	28	33	400
Totals	7,487	357	409	5,369
Totals 1945	5,117	289	326	3,659
Increase	2,370	68	83	1,710

Traffic Safety

In May and June 1946, the International Association of Chiefs of Police in conjunction with the Chief Constables' Association of Canada, again sponsored a continent wide Safety Programme in an endeavor to combat the serious rise in traffic accidents and fatalities.

The programme was known as the Police Traffic Safety Check, and its primary purposes were conveyed in the three-fold slogan selected to be used during the campaign to wit: "Check your car"—"Check your Driving"—"Check Accidents."

The purpose of the Campaign was educational, and not punitive, and the primary object was to encourage motorists to drive safely, observe the traffic laws, and maintain their vehicles in a safe and roadworthy condition.

Leaflets were given to every motorist stopped by police for any purpose; to school children in rural schools; to garage and service station workers.

Posters were distributed to: garage and service stations, general stores, public offices, county buildings, police and fire stations, post offices, bus terminals, etc.

Patrol Officers also visited all rural schools on their detail, and had a few minutes talk with the pupils on the relationship of the Traffic Check to safety measures on the Highways. By this means, the Campaign penetrated into practically all homes in the Province, as a result many persons who would not otherwise have known of the efforts being made have become "Safety Conscious."

PROSECUTIONS FOR TRAFFIC OFFENCES UNDER H.T.A. AND CRIMINAL CODE

For the period January 1st to December 31st, 1946

Offences	Prosecutions	Convictions	Dismissals	Withdrawals
Speeding	763	744	11	8
Defective Lights	1,052	1,014	27	11
Careless Driving	2,430	1,987	303	142
Crowding Front Seats	24	23	1	....
No Permit (Drivers, Operators, etc.)	860	818	21	21
Driving Under Sixteen	4	4	...	....
Failing to Stop at Through Street	277	269	5	3
Improper Left Turn	66	62	4	
Overloading	765	748	11	6
Defective Brakes	296	281	7	8
Fail to Remain at Accident	77	61	10	6
Parking on Highway	223	190	17	16
Rules of Road—Breach of	728	687	25	16
Failure to Notify Purchase	60	52	4	4
Failure to Notify Change of Address	24	20	2	2
Bicycles, Lights, Bells, etc.	2	1		1
Public Commercial Vehicle Act	58	50	3	5
Miscellaneous	464	425	22	17
Chauffeurs—No License	27	25	1	1
Owner's Name Not on Vehicle	23	23		
Reflector	42	39		3
Failure to Report Accident	54	45	7	2
Failure to Produce Permit or License	121	114	5	2
Markers Dirty	27	25	1	1
Totals	8,467	7,707	487	273

CRIMINAL CODE—SECTION 285

Offences Concerning Motor Vehicles

Offences	Prosecutions	Convictions	Dismissals	Withdrawals
Driving While Intoxicated	385	322	53	10
Hit and Run Drivers	77	62	8	7
Taking Car Without Owner's Consent	105	92	7	6
Reckless or Dangerous Driving	604	427	124	53
Driving While License Suspended	28	22	3	3
Leaving Scene of Accident	41	34	6	1
Totals	1,240	959	201	80

STATISTICAL RETURNS

CLASSIFIED RETURN OF PROSECUTIONS, CONVICTIONS, DISMISSALS AND WITHDRAWALS

JANUARY 1st TO DECEMBER 31st, 1946

	Prosecutions	Convictions	Dismissals	Withdrawals
Criminal Code and Other Statutes	7,406	5,677	1,077	652
Highway Traffic Act	8,467	7,707	487	273
Liquor Control Act	4,773	4,509	110	154
Wartime Regulations	50	25	....	25
Totals	20,696	17,918	1,674	1,104
1945 Totals	16,205	14,195	1,219	791

RETURN OF CRIMINAL PROSECUTIONS

Offence	Convictions	Dismissals	Withdrawals	Total
Abduction	7	1	1	9
Abortion	1	......	.....	1
Affray	40	3	......	43
Arson	10	..	......	10
Assault—Aggravated	13	3	5	21
Assault—Bodily Harm	219	76	36	331
Assault—Common	306	71	60	437
Assault—Female	23	14	4	41
Assault—Indecent	80	24	18	122
Assault—Intent to Rob	8	3	....	11
Assault—Police Officer	10	4	1	15
Attempted Arson	1	1		2
Attempted Breaking and Entering	1	3		4
Attempted Buggery	3	1	......	4
Attempted Carnal Knowledge	3		......	3
Attempted Fraud	1		......	1
Attempted Rape	2	1	1	4
Attempted Suicide	20	3	9	32
Attempted Theft	21	6	2	29
Bigamy	3	.	..	3
Breaking and Entering	109	9	3	121
Breaking and Entering and Theft	84	4	5	93
Breaking Gaol	3	1	.. .	4
Bribery	1		1	2
Buggery	1	.	.. ..	1
Burglary	26	9	3	38
Carnal Knowledge	9	5	3	17
Concealment of Birth	1	1	....	2
Conspiracy	1	4	5	10
Corrupting Children	5	3	....	8
Conversion	1	2	....	3
Criminal Negligence	6	11	..	17
Cruelty to Animals	27	7	3	37
Damage to Property	75	20	13	108
Damage—Wilful	75	14	8	97
Disorderly Conduct	196	24	20	240
Disturbance	15	...	.	15
Explosives—Illegal Possession	4	1	....	5
Escaping Custody	20	..		20
False Pretences	139	12	23	174
Forgery	49	2	3	54
Fraud	11	1	1	13
GAMBLING				
Gaming House—Keeper	36	5	1	42
Gaming House—Found In	125	7	2	134
Recording and Registering Bets	1	1	.	2
Keeper Common Betting House	45	2	3	50
Disorderly House	2	3	.. ..	5
Betting or Wagering	4	1	.	5
Gambling Devices—Conducting	1		.	1
Gross Indecency	10	....	.	10
Highgrading	11	.	1	12
Housebreaking	246	50	12	308
Incest	18	2	2	22
Incorrigible (Juvenile Delinquency)	22	3	2	27
Indecent Acts	35	7	2	44
Impersonating Police Officer	5	..	....	5
Intimidation	20	6	6	32
Kidnapping	3	...	...	3
Manslaughter	13	15	1	29
Military, Wearing Medals, Uniforms	6	2	1	9
Miscellaneous Offences	145	15	5	165
Mischief	58	4	5	67
Murder	6	6	2	14
Non Support, Children, Wife	34	9	13	56
Obstructing Police	33	3	3	39

RETURN OF CRIMINAL PROSECUTIONS—Continued

Offence	Convictions	Dismissals	Withdrawals	Total
Perjury	3	2	......	5
Rape	3	9	2	14
Robbery and Extortion	12	1	......	13
Robbery—Armed	23	1	......	24
Robbery—With Violence	30	4	6	40
Seduction	2	....	3	5
Shooting with Intent	2	1	......	3
Shopbreaking	186	19	19	224
Stolen Property—In Possession of	7	......	2	9
Stolen Property—Receiving or Retaining	72	23	11	106
Theft	997	191	71	1,259
Theft of Poultry	25	7	3	35
Theft of Automobiles	46	8	7	61
TRAFFIC OFFENCES				
Driving While Intoxicated	322	53	10	385
Hit and Run Drivers	62	8	7	77
Taking Car Without Owner's Consent	92	7	6	105
Reckless or Dangerous Driving	427	124	53	604
Driving Whilst License Suspended	22	3	3	28
Leaving Scene of Accident	34	6	1	41
Trespassing	9	1	2	12
Threatening	12	5	3	20
Uttering	18	1	1	20
Vagrancy	375	60	128	563
Weapons—Offensive	73	7	2	82
Weapons—Carrying Concealed	9	....	..	9
Wounding with Intent	16	10	.	26
Totals	5,388	1,036	629	7,053

REVISED STATUTES OF ONTARIO

Offence	Convictions	Dismissals	Withdrawals	Total
Children Maintenance Act	1		...	1
Children Protection Act	9		...	9
Deserted Wives Act	27		5	32
Forest Fire Prevention Act	10	2	.....	12
Game and Fisheries Act	37	2	. .	39
Highway Improvement Act	19	1	.	20
Master and Servant Act	6	1	4	11
Mental Hospitals Act	59	22	6	87
Mining Act	1	.	...	1
Miscellaneous Provincial Statutes	35	3	....	38
Public Health Act	1	..	......	1
School Attendance Act	22	.	2	24
School Training Act	9	6	....	15
Venereal Disease Act	3	.	.	3
Theatre and Cinematograph Act		1	.. ..	1
Totals	239	38	17	294

REVISED STATUTES OF CANADA

Offence	Convictions	Dismissals	Withdrawals	Total
Indian Act	16	1	5	22
Radio Act	16	....	1	17
Juvenile Delinquent Act	15	2	......	17
Excise Act	1	......	......	1
Lord's Day Act	1	......	......	1
Militia Act	1	......	......	1
Totals	50	3	6	59

WARTIME REGULATIONS

Offence	tions Convic-	Dis- missals	With- drawals	Total
Breach of Wartime Prices and Trade Board Regulation	9	......	1	10
Breach of National Registration	16	......	24	40
Totals	25	......	25	50

GRAND TOTALS

Offence	Convic- tions	Dis- missals	With- drawals	Total
Criminal Prosecutions	5,388	1,036	629	7,053
Prosecutions under Revised Statutes of Ontario	239	38	17	294
Prosecutions under Revised Statutes of Canada	50	3	6	59
Prosecutions under Wartime Regulations	25	......	25	50
Totals	5,702	1,077	677	7,456
1945 Totals	5,595	765	510	6,870

Arrested with or without warrants and persons summoned for offences against the Criminal Code and other Dominion and Provincial Statutes:

Arrested with Warrant under Criminal Code, Highway Traffic Act and other Statutes	1,629
Arrested with Warrant under Liquor Control Act	87
Arrested without Warrant under Criminal Code, Highway Traffic Act and other Statutes	3,544
Arrested without Warrant under Liquor Control Act	2,227
Summoned, etc.	13,209
Totals	20,696
1945 Totals	16,205

Classification of the ages of persons prosecuted for offences against the Criminal Code and other Dominion and Provincial Statutes, Highway Traffic Act and the Liquor Control Act:

Ages 10-15 years	495
" 16-20 "	3,113
" 21-30 "	7,229
" 31-40 "	4,075
" 41-50 "	2,866
" 51-60 "	1,415
" 61-70 "	518
Over 70 years	119
Companies	876
Totals	20,696
1945 Totals	16,205

Classification of nationalities of persons prosecuted for offences against the Criminal Code and other Dominion and Provincial Statutes, Highway Traffic Act and Liquor Control Act:

Americans	396
Canadians	16,959
English	357
Indian	299
Irish	96
Italians	155
Jewish	177
Polish	237
Russian	196
Other Nationalities	948
Companies	876
Totals	20,696
1945 Totals	16,205

Classification of sex of persons prosecuted for offences against the Criminal Code and other Dominion and Provincial Statutes, Highway Traffic Act and the Liquor Control Act:

Males	18,976
Females	844
Companies	876
Totals	20,696
1945 Totals	16,205

Classification of marital state of persons prosecuted for all offences against the Criminal Code and other Dominion and Provincial Statutes, Highway Traffic Act and the Liquor Control Act:

Married	9,559
Single	10,092
Widows	50
Widowers	115
Companies	876
Totals	20,696
1945 Totals	16,205

Number of Search Warrants executed under the following:

	1946	1945
Criminal Code	842	1,101
Highway Traffic Act	11	22
Liquor Control Act	1,257	1,200
Number of arrests for other Forces	549	434
Summonses served for other Forces	1,709	1,177

LOST OR STOLEN PROPERTY RECOVERED

Property which had been reported lost or stolen to the value of $401,932.73 was recovered by members of the Force and restored to its various owners.

CONCLUSION

In conclusion I desire to express my sincere appreciation for the counsel and advice received at all times from the Deputy Attorney-General and Solicitors of your Department.

I also wish to thank the Press and Radio Officials, Municipal, Railway and Royal Canadian Mounted Police Forces for their ever-ready assistance and co-operation throughout the year.

I further desire to assure you on behalf of the Force of which I have the honour to be the head that the same constant vigilance and devotion to duty will be maintained in the future as it has been in the past.

Respectfully submitted,

WILLIAM H. STRINGER,

Commissioner of Police for Ontario.

REPORT

OF THE

MINISTER OF TRAVEL AND PUBLICITY

PROVINCE OF ONTARIO

FOR THE FISCAL YEAR

1946 - 1947

Printed by order of
THE LEGISLATIVE ASSEMBLY OF ONTARIO

Sessional No. 48, 1947

ONTARIO

TORONTO
Printed and Published by The Printer to the King's Most Excellent Majesty
1947

To:

THE HONOURABLE RAY LAWSON, O.B.E., LL.D.,

Lieutenant-Governor of the Province of Ontario, in Council.

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to transmit herewith the First Annual Report of the Department of Travel and Publicity, for the fiscal year 1946-47.

I have the honour to be, sir,

Your obedient servant,

ARTHUR WELSH,

Minister of Travel and Publicity.

Department of Travel
and Publicity, Ontario.
Toronto, Ontario,
April 3, 1947.

REPORT OF THE DEPUTY MINISTER

To The Honourable Arthur Welsh,

Minister of Travel and Publicity.

The undersigned has the honour to submit herewith the first annual report of activities of the Department of Travel and Publicity for the period, April 1, 1946 to March 31, 1947.

During its first year of operation the Department endeavoured to carry out a dual program. There was, first of all, the immediate and pressing need of preparing and organizing for the heavy anticipated flow of summer tourists during the season commencing about the first of June. With this was coupled the necessity of establishing a departmental organization to plan and take the initial steps toward the improvement generally of this Province's tourist catering services and the further development of our recreational resources.

The past year was the first in seven in which the citizens of our own and neighboring countries were free to travel without restriction for pleasure purposes. With the termination of the war in Europe and the Far East, and the continuing prosperity of the reconstruction period, there developed in the United States and to a similar degree, in Canada, a feeling which was expressed by the slogan of the National Association of Travel Officials in the United States: "You've Earned a Vacation—Now Take It!"

It became evident early in the year that 1946 would establish new records for vacation travel in Ontario. Opposed to this great potential was the fact that for seven years, our tourist-catering establishments had been unable to maintain their physical equipment and had been prevented, by reason of shortages of every kind, from adding to their facilities. Coupled with this was the fact that our country was still operating, insofar as certain foods were concerned, upon a wartime economy.

Plans Made for Record Year

In the main, these problems were dealt with as follows:

(1) Tourist organizations, chambers of commerce, boards of trade and similar bodies were "alerted" early in the year as to the necessity of anticipating the increased flow of visitors to their communities. They were urged to take action to ensure that proper facilities, even though they be emergent in character, were available. The response to this action was excellent. In many cases householders opened their homes, and throughout the Province a loose but effective organization was established to channel the flow of visitors to those communities and districts where they were most likely to secure accommodation.

(2) Advertising designed to draw visitors to some of the lesser-known areas was widely circulated throughout the United States. This was to offset the possibility of a situation arising in which established tourist regions might experience an overflow of guests while some of the more remote areas might suffer as a result of overcrowding.

(3) Tourist reception centers were established at several of the main border-crossing points from the United States. Trained representatives of the Department met visiting motorists and rendered considerable assistance in suggesting routes, providing guidance on points of interest and arranging overnight accommodation. In addition, the friendly welcome

given visitors to these centers undoubtedly had the effect of mitigating to some extent at least, some of the disappointments and misunderstandings which might have resulted from commodity shortages and other inconveniences stemming from the war period.

Few Complaints Recorded

In assessing the 1946 tourist season it is significant that although an estimated fourteen million persons from the United States alone visited the Province for varying periods, there were fewer than 30 actual complaints registered with the Department. All of these were carefully investigated and where warranted, action was taken to assist in securing redress.

The Deparment does not, of course, claim full credit for the record flow of tourist traffic into Ontario during 1946. Many other agencies, including the Canadian Travel Bureau at Ottawa, transportation and hotel companies, operators' associations, regional groups and chambers of commerce, were very energetic in their efforts to stimulate the flow of visitors.

The result of this coordinated endeavour is to be found in the tables of statistics which are to be found elsewhere in this report. A preliminary estimate places the value of the 1946 tourist flow into Ontario from foreign countries at somewhere in the neighborhood of 110 million dollars. There is no way, unfortunately, of appraising the amount of money left in the Province by visitors from other portions of Canada or by Ontario people who find that 412,000 square miles of their own Province offers everything necessary for an enjoyable vacation.

900,000 Permits Issued

In 1946, with tire and gasoline restrictions lifted, the motorist again became the major factor in our tourist industry. More than 900,000 touring parties entered Ontario during the year on Travellers Vehicle Permits. This compares with the previous "highs" of 857,293 such permits in 1931 and 828,222 in 1937. The next large group of tourists to Ontario includes those travelling by rail. Although more than 1,200,000 persons entered the Province from the United States as passengers on trains, the large portion of them were classifiable as "intransits" travelling through Southern Ontario between two American points. The net volume of U. S. visitors arriving in Ontario by rail who could be properly classified as tourists was 307,735.

Extension of motorbus services witnessed a marked increase in the number of visitors using that method of transportation. During 1946 there were 221,523 entries by bus of U. S. citizens into Ontario. This represents a substantial increase over corresponding figures for the pre-1941 period.

The volume of boat and air travellers also increased far beyond the former levels. Nearly 130,000 persons came to Ontario by boat in 1946, while 29,049 travelled by airplane. The latter figure, although small in proportion to the volumes recorded by other methods of transportation, is significant in comparison with the flow in the pre-war period when entries of this nature were so negligible that records were not maintained.

Improved Standards Sought

Much of the Department's activity during the year under review was concerned with the developing of plans for improving tourist-catering standards generally. A complete report of efforts in this direction is contained in the summary of activities of the Development Branch which forms part of this Report.

In the field of development, an effort is being made to lengthen the tourist "season". Ontario has all the attributes of a year-round vacation land and a vigorous effort is being made to promote vacations in months other than June, July and August. Considerable success was enjoyed by the Winter Promotion Branch in stimulating interest on the part of regional and community organizations in the provision of winter sports facilities.

Departmental Cooperation With Other Bodies

The Department recognizes that in this age of rapid and inexpensive transportation new and large areas have been brought within the reach of the traveller to whom distance would have presented an insurmountable barrier ten or fifteen years ago. With so many parts of the world in competition for the tourist dollar there has developed a recognition of certain larger areas as distinct recreational entities apart from provincial, state or national boundaries. An outgrowth of this recognition was the formation of the Northern Great Lakes Area Council, composed of representatives of the tourist industry from the states of Michigan, Wisconsin and Minnesota, and the Province of Ontario. Several meetings have been held for the purpose of formulating a common program for the study and further development of the tourist resources of the entire region. Members of the Council include in each instance, the Governor or Prime Minister of the state or province, and four persons appointed by him. The Ontario representatives are the Minister of Travel and Publicity, Mr. C. C. Manore of Sarnia, Mr. Fee Devine of Sault Ste. Marie and Mr. Arthur Widnall of Fort William.

Another organization of a somewhat similar character is the Lake Erie International Vacationland Conference which embraces representatives from that portion of Ontario abutting on Lake Erie, together with representatives from the states of Ohio, Pennsylvania and New York. Although the Department is not actively represented in this organization, it has co-operated with it in the furtherance of their program which includes a canvass and survey of all recreational and accommodation facilities in the area.

In addition, through the Canadian Association of Tourist and Publicity Bureaus, the Department has co-operated with other travel promotion agencies throughout Canada in the development of a national program.

All of which is respectfully submitted.

TOM. C. McCALL
Deputy Minister.

REPORT OF THE PUBLICITY BRANCH

The Publicity Branch has responsibility for the preparation and production of all publications and other literature used by the Department, and of advertising and publicity for the promotion of tourist travel. The latter item includes newspaper releases, special features for magazines, compiling and releasing events lists to travel publications, planning, producing and distribution of motion pictures, planning and purchase of photographs, release of photos to such media as travel pages, house organs and independent writers producing stories of value to the tourist trade in Ontario, and to camp and resort operators who are unable to supply themselves with suitable illustrative material for their folders. The Branch also provides advice and assistance to individual operators and associations in the production of folders, booklets and other publications. In addition, assistance is given in publicizing special events such as winter carnivals, regattas and various celebrations of a local character.

Production of Publications

During the past year much of the work of the Branch has revolved around the necessity of producing entirely new publications to replace those which have been in use, with minor changes, for some years. This production work includes planning, writing, supervising of printing and proof-reading. These publications are as follows:

"Southeastern Ontario".
"Southwestern Ontario".
"Central Ontario".
"Northern Ontario".
"Northwestern Ontario".
"The Fisherman's Ontario".
"Flying Facts About Ontario".
"Ontario—Your Best Vacation Bet".
"With Rod and Gun in Ontario".
"Where to Stay in Ontario".
"Winter Sports in Ontario".
"Waterways to Explore—The Rideau".

In addition to those listed above, the Branch also handled the revision and re-printing of several publications which were formerly in use, as well as the planning and production of an attractive illuminated letterhead form to be used by the Information Branch.

Liaison is also maintained with radio outlets and information is continually being furnished to commentators, announcers and producers of special events broadcasts. During the year the Branch Director appeared as guest on several programs and was given an opportunity to publicize the vacation attractions of Ontario.

Contact with travel editors and outdoors writers is an important function of the Branch. Writers from several of the leading metropolitan newspapers in the United States visited Ontario during 1946 and with the assistance of the Department secured material and photographs which were given wide circulation.

Preparation of special feature articles for various newspapers and magazines is also a function of the Branch. During the past year many of these were produced and their publication resulted in excellent publicity for the Province.

Travel Films Produced

Recognition of the important part that motion pictures play in influencing prospective visitors in their selection of a vacation region resulted in the acquisition by the Department in 1946 of the following films:

"Algonquin Adventure".
"Manitoulin Holiday".
"Northern Autumn".
"Land of Niagara".

These are all in colour and three of them carry a sound-track. They were especially developed for the Department's use and are in considerable demand for showing to sportsmen's groups, travel and service clubs.

Still photographs form an important publicity media and during 1946 considerable progress was made in assembling a complete file of subjects dealing with recreation in Ontario. As indicated above, prints of these photos are made available to publications desiring them and a good quantity has also been sent to Great Britain for distribution through Ontario House. Apart from the very extensive use made of these pictures within the Department, more than 500 requests for photos from outside sources were handled during the year. In this connection, a policy is followed of furnishing prints only where there is no possibility of competion with commercial photographers.

Photography Section Active

The photography section of the Publicity Branch undertook several special projects during the year. A photographer accompanied the American Press Goodwill Tour party in June and secured a quantity of still photographs which were furnished members of the party for reproduction in their newspapers and as mementos of their visit to Ontario. In addition an 800-foot motion picture in color was made during the tour and a copy was furnished each participant. This film, which depicts Ontario's natural attractions, has been extensively screened before service clubs, lodges, sportsmen's groups and other organizations in eight states.

A somewhat similar project was the assignment of a photographer to accompany a large group of Boy Scouts on a canoe trip through Temagami. After editing and titling the film was made available to sponsors of the trip and has attracted considerable attention through screenings in New York state.

One of the major undertakings of the year was a photographic survey of tourist attractions along King's Highways 11 and 17 extending from the southern part of the Province to the Manitoba Border. This was done in co-operation with the Department of Highways and a good file of still photos obtained for use in departmental publications and elsewhere.

Publicity Releases

Publicity releases are forwarded regularly to 700 travel editors in the United States. The policy of the Department is to supply such releases only when it is felt that they contain material which can be justified from a news standpoint. The effect of this policy has been that the Department's releases, although fewer in number than those issued by many other competing agencies, command a respect which is reflected in their extensive usage.

Similar procedure is followed with all new publications. A copy goes to each travel editor immediately after publication and a quantity of six hundred and fifty is also furnished to the head office of the Outdoor Writers of America to accompany that organization's monthly bulletin. Good reviews with consequent wide publicity frequently results.

Planning and production of displays for exhibitions of various sorts was also an important function of the Branch during 1946. A special display was arranged for the International Air Show held in Toronto during September, and two others were arranged for various outdoor and travel expositions held in the United States and Canada during the winter and spring.

A relatively minor but important activity of the Branch is the handling of correspondence emanating from writers desiring to produce material concerning the Province and requiring information of various sorts. Some of this requires considerable research but an effort is made to supply detailed data in response to all such requests.

Advertising Program

Although the Department's advertising activities were not as extensive during 1946 as in some former years, the planning and execution of a campaign in newspapers and magazines was one of the major activities of the Branch.

During the spring months thirty-two distinct advertisements dealing with various resort regions of the Province were produced. These were single-column in size, ten inches in length, and appeared three times in each of thirty-three metropolitan United States newspapers. An excellent response was obtained from these.

Other advertisements, using approximately one-third of a page in each instance, were developed for insertion in six leading outdoors and sportsmen's publications. These ran in two consecutive issues and stressed the Province's attractions from the standpoint of the fisherman and the outdoorsman. Somewhat similar copy was prepared for insertion during the autumn, the theme in this instance being hunting.

In conjunction with the Department's efforts to popularize the so-called "off-season" months, a secondary advertising campaign was initiated in August and appeared in a limited number of newspapers published in American cities close to the Ontario border. These stressed Ontario's attractions for the late-season vacationist and for the sufferer from hay-fever.

In December and January a newspaper campaign was conducted in another group of border cities for the purpose of advertising Ontario's winter sports attractions. Half-column space was used, twice in each publication. This was followed later by special advertisements drawing attention to various special winter events, including the carnivals and the ski schools conducted by the Department.

During January a "feeler" campaign was conducted in newspapers in Florida, Texas and California for the purpose of selling Ontario for summer vacations to those who spend their winters in the south. Response to this was excellent, particularly from Texas which appears to offer a fertile field for publicizing Ontario despite the considerable distance involved.

Other advertisements were prepared by the Branch for publication in newspapers in Northern Ontario in an effort to elicit information for use in the new publication "Where to Stay in Ontario".

In the field of advertising plans must be made and copy and illustrations prepared far in advance of actual publication. As a consequence a good share of the Branch's activity during the year under review was devoted to the development of the ensuing year's program. This includes a series of advertisements to be run in a selected group of magazines and newspapers in the United States, these being "keyed" to the Department's new literature. Advertising copy has also been prepared for publication in Canadian newspapers and periodicals for the purpose of stressing Ontario's attractions from the standpoint of the Canadian vacationist.

Goodwill Tour Resumed

The past year also saw the resumption of the very successful "American Goodwill Press Tour" which had been held in 1940 and 1941. In conjunction with the Canadian Weekly Newspaper Association and the Hotel Association of the Province of Ontario the Department played host to twenty-one United States editors during a 1500-mile tour of Ontario. The following states were represented: New York, New Jersey, Pennsylvania, Ohio, Kentucky, Michigan, Illinois. The trip was made in a chartered bus during the middle of June and the following points were touched during the itinerary: Niagara Falls, Hamilton, Fergus, Elora, Owen Sound, Little Current, Sudbury, North Bay, Sundridge, Huntsville, Algonquin Park, Pembroke, Ottawa, Smiths Falls, Chaffey's Locks, Kingston, Picton, Belleville, Trenton, Peterborough, Clear Lake, Bowmanville, Toronto, Brampton, Burlington.

During the tour the visitors had an opportunity to attend the unveiling of a memorial cairn in honour of the fishing trip of the late President Roosevelt near Manitoulin Island.

A motion picture of the trip was made and is currently being circulated among those participating. More than 85 articles and 140 photographs were published in the newspapers represented by the guests and in one instance a special eight-page supplement, printed on magazine stock, was distributed.

MARY AINSLIE,
Director, Publicity Branch.

REPORT OF THE INFORMATION BRANCH

The Information Branch compiles and disseminates information relating to the vacation attractions and facilities of the Province, distributes departmental publications and other literature and assists in the distribution of published material prepared by regional associations, transportation companies and resort proprietors. Another function of the Branch is to reply to all mail enquiries, these frequently running in excess of 500 per day. An important phase of its activity is the operation of reception centers and the training of staffs for these.

During the period May 1 to September 30 more than 23,000 written enquiries, each requiring an individual answer, were handled by the Branch. The greater proportion of these, as might be expected, emanated from the United States.

Chief Tourist Attractions

From this correspondence and from interviews conducted by reception center staff members, it has been possible to assess the chief tourist attractions which Ontario has to offer. These are, in order of the importance placed upon them by the visitor:

1. Touring and sight-seeing.
2. Resort holidaying.
3. Fishing.
4. Hunting.

In handling mail enquiries close co-operation is maintained with the Canadian Travel Bureau at Ottawa, the travel bureaux of other provinces, as well as with district and local tourist organizations. The prime objective is that the enquirer receive the fullest possible information with a minimum of clerical delay.

Tourist Reception Centres

During 1946 a substantial start was made toward the establishment of a chain of tourist reception centers at principal border points of entry. Difficulties in procuring suitable sites and construction materials hampered progress to some extent but during the year it was possible to put eight centers into operation.

Location	Date of Opening	Date of Closing	Supervisor	Assistants
Fort Erie (Peace Bridge)	Feb. 1	Oct. 31	W. W. Stratton	2
Sault Ste. Marie (Ferry Dock)	June 17	Oct. 31	L. H. McAuley	2
Pt. Edward (Blue Water Bridge)	June 19	Oct. 15	E. L. Hardy	3
Niagara Falls				
Rainbow Bridge	June 22	Oct. 31	D. Allen	3
Whirlpool Rapids Bridge	June 22	Oct. 31	D. Allen	2
Lansdowne (1000 Islands Bridge)	July 16	Oct. 15	G. T. Roberts	2
Prescott (Ferry Dock)	Aug. 22	Oct. 15	J. G. Quinn	2
Windsor (Ambassador Bridge)	Sept. 25	Oct. 31	R. L. Henry	4

An information desk is also maintained in the Main Building of the Parliament Buildings in Toronto. Due to the fact that many thousands of visitors inspect the buildings during the summer months in addition to local people seeking vacation information, it has been found that this desk serves a very useful purpose.

A reception center to serve traffic arriving in Windsor through the tunnel was completed late in the season, as was another unit situated at the junction of the Queen Elizabeth Way and King's Highway No. 8. Plans call for the opening of these two centers on May 1st of the present year, together with the eight listed above. Depending upon the availability of materials and equipment other units will be placed in operation during the late spring at Pigeon River, Fort Frances and Kenora-Keewatin.

Supervisors' reports indicate that a total of 128,038 visitors made use of the facilities available at the reception centers during 1946. The services rendered included information and advice on sight-seeing, tours and vacation areas, provision of highway mays and other travel literature, marking of routes and advice and assistance in securing overnight accommodation.

There is ample evidence that visitors have appreciated the facilities provided by these centers. The program was greatly assisted by the energetic co-operation of local organizations, particularly in aiding our staffs to secure accommodation for visitors.

Close Liaison Maintained

One of the more important activities of the Branch is the maintaining of a close liaison with the 216 organized chambers of commerce and boards of trade in the province. These bodies have all demonstrated a lively appreciation of the importance of the tourist industry and without exception have extended a full measure of co-operation.

Apart from the many civic and local organizations which have interested themselves in the promotion of the industry, the Department has had close contact with the following organizations devoted to the promotion and development of larger areas:

The 1000-Island, St. Lawrence River and Rideau Lakes Association
The Muskoka Tourist Development Association
The Highlands of Haliburton County Tourist Association
The Lake of the Woods Tourist Bureau
The Kawartha Lakes Tourist Association
The Prince Edward County Publicity Committee
The Blue Water Highway Association
The Toronto Convention and Tourist Association
The Ottawa Industrial and Publicity Committee
The Essex County Tourist Association
The Bruce Peninsula Resort Association
The Land O' Lakes Tourist, Resort Owners and Protective Association
The Greater Niagara Chamber of Commerce
The Huronia Historic Sites and Tourist Association
The Algoma Travel Bureau
The Fort William Civic Tourist Bureau
The Port Arthur Chamber of Commerce
The Norfolk County Chamber of Commerce
The Northern Ontario Outfitters Association
The Hotel Association of the Province of Ontario

Tourist Lists Distributed

A new departure within the past year was the development of a plan to make available to all recognized tourist organizations lists of persons forwarding requests for travel information to the Department. These lists are prepared every few days in mimeographed form and have the effect of producing a quick on-the- spot follow-up to the enquiry in addition to the material sent forth from the Department at Toronto. Lists covering enquiries originating at the outdoors and travel expositions were also issued as a supplement to the main list.

Travel folders and booklets produced by regional organizations are distributed by the Information Branch to individual enquirers by mail from the head office and directly from the reception centers. There is an increasing appreciation of the importance of this type of publicity material and of the effectiveness of well-produced printed matter with good art work and illustrations. The typical vacation-planner does his planning at home with his family, aided by maps, time-tables and travel literature, and those districts which give due thought to attractive and informative brochures, plentifully circulated, will find their reward in an increasing share of Ontario's tourist business.

More Air Travel Seen

It is evident that the Province can expect an increasing number of visitors to arrive by chartered or private aircraft. With this in mind, the Information Branch has compiled, with the assistance of the Federal Department of Transport, an Air Information Map indicating landing fields and anchorages within the Province, and listing essential information together with references to the Dominion authority from which charts, clearances, etc., are obtained.

Three officers of the Department attended the Royal Ontario Museum extension course on Fish and Wildlife, and with the assistance of the Museum staff assembled information on the incidence of fish in Ontario waters, which, coupled with data from the Department of Lands and Forests, forms the basis of an information map in the new publication "The Fisherman's Ontario".

Other lists compiled by the Branch include those dealing with golf clubs, hotels, resorts, lodges, cabin and trailer camps. These will appear in the booklet, "Where to Stay in Ontario". Amendments and additions to these lists are continuous and a new annual edition is projected.

The Branch also maintains a file on coming events in Ontario and supplies this information to periodicals and other agencies.

C. D. CROWE,

Director, Information Branch.

REPORT OF THE DEVELOPMENT BRANCH

The Development Branch is responsible for the inspection and the licensing of tourist camps as described in The Tourist Camp Regulation Act, 1946, and also functions in an advisory capacity to resort operators and persons who plan to enter the tourist industry.

One of its initial acts was the preparation of a questionnaire form for the purpose of eliciting information regarding accommodation, facilities and standards generally of cabin camps in Ontario. Before undertaking a province-wide survey, members of the branch visited a number of camps in the vicinity of Toronto and were able, through these visits, to make comparative observations as to the standards to be expected elsewhere.

Tourist Accommodation Surveyed

For immediate purposes the Province was divided into two zones with the Pembroke-Parry Sound line as the northern border. No attempt was made to cover the region north of this line inasmuch as licensing regulations were already in effect under the jurisdiction of the Department of Lands and Forests. Of the 25,000 miles travelled by the branch staff, the following principal districts and highways were covered during inspections and investigations during the season:

King's Highway No. 2—Windsor to the Quebec Border.
King's Highway No. 3—Windsor to Niagara Falls.
King's Highway No. 11—Toronto to Novar.
King's Highway No. 17—Quebec Border to Pembroke.
King's Highway No. 69—Gravenhurst to Parry Sound.
King's Highways No. 21, 26, 27—Sarnia to Penetanguishene.
Haliburton District.
Muskoka District.
Rideau Lakes District.
Trent Valley.

1,000 Camps Visited

During the course of their inspection, members of the staff visited approximately one thousand camps. Each camp was assigned to a category or classification, according to the extent and nature of the facilities offered. As a result of this survey, the following conclusions emerged:

(1) There is a definite awareness on the part of the public generally of the opportunities offered in the tourist industry. A large number of prospective resort or camp operators visited the Department for assistance and suggestions in developing projects. In addition to these, a large volume of enquiries was received by mail, in which counsel and advice was sought.

(2) By means of a first-hand survey covering such an extensive area, members of the Department's staff were able to circulate valuable information and assistance based upon the actual experience of operators in the field. This included guidance on location, highway traffic statistics, planning, various government regulations, equipment, etc.

(3) Operators of tourist catering establishments have a healthy

appreciation of the necessity of improving their standards if they are to retain their competition position in the industry.

(4) Due to the falling-off of patronage during the war period, many cabin camp establishments became run-down and with the current shortages of materials a considerable time may elapse before they are restored to the standard necessary to attract the desired type of patron.

During the course of the survey, Branch members had an opportunity to interview many visiting tourists. In these interviews, which covered seventy groups, only one complaint was voiced, and that with regard to a matter beyond the scope of the Department's activities. There appeared to be a general feeling of tolerance and satisfaction with regard to shortages of certain foods or lack of certain facilities.

A small number of complaints were received by mail and each was investigated by the Branch. The principal cause of dissatisfaction thus evidenced stemmed from alleged misrepresentation of facilities or rates in advertising. Provision is now made under the Regulations enacted by authority of The Department of Travel and Publicity Act, 1946, to deal summarily with offenders.

Under auspices of the Branch a meat-cutting demonstration for resort owners was arranged and held at Huntsville on June 3, a subsequent one being held at Limberlost Lodge in conjunction with the spring meeting of the Resort Association. Both were well attended. A representative of the Branch also participated in the tour of the Lake Erie rim sponsored by the Lake Erie International Vacationland Conference in June and had an opportunity to study resort and recreational facilities in the United States as well as in Southern Ontario. In addition, the Branch was represented at the Humber Bay Conservative Conference.

Information Bulletin Published

Publication of a printed, four-page, tabloid-style "Information Bulletin" was also undertaken during the year. More than 1,800 copies are now published each month and are forwarded to individuals and organizations interested in the expansion of Ontario's tourist industry. The publication contains material of a newsy and informative character, a calendar of coming events within the Province, notes and advice bearing upon improved standards, statistics, etc. Its circulation has increased by more than 500 percent since its initial issue, the increase resulting from specific requests for inclusion on the mailing list.

MORGAN CARRY,
Director, Development Branch.

REPORT OF THE WINTER PROMOTION BRANCH

Purpose of this Branch is to assist regional associations, camp and resort operators and other individuals and groups desiring to develop or improve facilities for winter recreation in Ontario. A secondary purpose is to provide the necessary skilled training for our own people to enable them to become confident in supplying skilled instruction in outdoor sports.

One of the Branch's first activities was a representation made in May to the Professional Ski Alliance and the Canadian Amateur Ski Association, to have Canadian Travelling Ski Schools operate in Ontario for the first time in history. Acceptance of this proposal resulted in a very considerable amount of organization work to prepare for the actual holding of the schools during the winter. Sites were selected at North Bay and Fort William.

Ski Schools Held

The schools were held during the month of January, commencing on the 11th and the 18th respectively. Their prime purpose was to stimulate local interest in winter sports and to provide training for individuals who migh qualify as instructors. Four of the leading members of the Ski Instructors Alliance attending the North Bay school, and 31 students representing 15 municipalities were in attendance. The classes covered ten hours each day and consisted of skiing on the slopes, lectures, first aid demonstrations. At the termination of the course 14 students were qualified as assistant professionals, 11 as amateur instructors and six failed to meet the required standards.

From North Bay the Branch director and two representatives of the Alliance continued on to Fort William where the school was attended by 23 persons, including visitors from Minnesota. Eighteen qualified as assistant professionals and the remainder as amateurs.

In addition to these a smaller school was operated near Huntsville for one week during the winter, nine representatives of district resorts being given instruction.

The Branch supplied one of its members to officiate as a judge at the North Bay winter carnival. Assistance was also given in organizing ski events at the Sudbury carnival. It is estimated that 21,000 persons witnessed these latter events, the largest crowds ever to attend a Canadian ski meet. Further aid was also rendered by the Department in winter activities at Nipigon, Cobourg, Huntsville, Fort William and Bracebridge.

Ski Guide Planned

Preparations are now going forward for the publication of a complete skiing guide covering the Province. This will provide information such as: location, length of season, average snowfall, tows, length and type of tow, and other pertinent facts which will aid the prospective visitor to plan his winter vacation. Plans are also under way for the provision of a proper snow report service which will furnish information concerning winter sports conditions to newspapers, radio stations, travel bureaux and other organizations and individuals.

C. H. MELVILLE,
Director, Winter Promotion Branch.

* FOREIGN MOTOR VEHICLES ENTERING ONTARIO, 1946

According to Ports of Entry

	Non-Permit Class— Local Traffic	Travellers Vehicle Permits	Commercial Vehicles
Brockville	2,657	3,193	25
Cobourg		312	
Cornwall	27,135	8,445	1,565
Courtright	4,122	1,290	1
Fort Erie	793,769	193,753	12,360
Fort Frances	46,865	17,201	1,594
Fort William		5	
Gananoque			
Kingston		230	
Kingsville	1	313	
Lansdowne	5,013	70,166	1,846
Leamington	1	203	
Midland		5	
Morrisburg	1,267	1,809	38
Niagara Falls	338,206	206,188	4,492
Pigeon River	8,452	12,990	49
Port Arthur		191	
Port Lambton	6,717	2,007	38
Prescott	7,772	8,756	766
Rainy River	696	1,282	36
Sarnia	79,196	85,015	1,357
Sault Ste. Marie	27,701	24,324	665
Sombra	4,015	1,038	25
Toronto		200	
Walpole Island	2,614	701	8
West Dock	22	194	
Windsor	1,268,628	263,285	56,576
Totals	2,624,849	903,096	81,441

(*—Source; Dominion Bureau of Statistics)

* FOREIGN MOTOR VEHICLES ENTERING ONTARIO 1937-46

Travellers Vehicle Permits, **excluding** Local Traffic

Note—Travellers Vehicle Permits are issued to all non-commercial vehicles which—

1. Travel beyond the jurisdiction of the port of entry, or
2. Remain in Canada more than 48 hours, or
3. Leave the country by another port than the one by which they entered.

	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937
January	15,190	5,819	7,960	3,684	11,784	10,949	11,018	12,618	16,033	14,935
February	16,048	7,524	6,061	4,334	10,162	10,496	12,750	10,891	14,027	14,840
March	27,682	14,028	6,622	5,125	14,113	17,308	17,670	16,145	18,091	21,772
April	39,309	19,317	11,207	8,477	24,612	35,211	24,612	31,109	32,265	27,155
May	65,578	30,195	20,253	12,408	38,575	66,776	52,404	60,368	58,898	66,129
June	112,688	51,350	27,771	14,412	40,477	84,740	80,075	87,691	73,253	81,690
July	187,783	105,844	63,373	34,521	60,650	164,190	91,492	177,577	160,268	187,132
August	211,280	128,862	60,125	41,554	57,041	188,808	133,602	183,026	172,417	193,450
September	108,765	92,511	40,765	29,908	33,913	76,837	74,043	105,491	105,233	120,387
October	61,652	50,019	21,846	16,549	17,556	47,152	41,352	43,043	49,887	51,335
November	36,191	30,866	15,879	9,988	12,429	33,078	24,723	27,739	28,550	31,528
December	20,930	17,385	10,775	9,175	7,273	22,414	17,392	23,604	25,664	17,869
Total	903,096	553,720	292,637	190,135	328,585	757,949	582,917	779,302	754,568	828,222

* FOREIGN TRAVEL INTO ONTARIO, 1938-46

Classified according to number of persons and means of travel.

Year	By Rail†	By Bus†	By Boat	By Aeroplane
1938	569,010	N.A.	54,516	N.A.
1939	569,628	N.A.	68,851	N.A.
1940	552,806	N.A.	49,244	N.A.
1941	614,235	162,825	75,134	7,532
1942	916,465	120,651	52,820	4,592
1943	1,422,685	112,245	89,123	5,580
1944	1,634,791	151,197	93,772	6,766
1945	1,594,040	196,616	134,676	9,628
1946	1,272,598	308,813	129,068	29,049

(† Includes intransit traffic through Southern Ontario)

* FLOW OF U. S. MOTOR TRAFFIC INTO CANADA 1945-46

Based upon Province in which Travellers Vehicle Permits were Issued.

	No. T.V.P.'s 1945	No. T.V.P.'s 1946	Pct. of Total T.V.P.'s 1946
Maritimes	44,377	83,147	5.6
Quebec	138,215	277,641	18.6
Ontario	553,720	903,096	60.5
Manitoba	8,775	22,797	1.5
Saskatchewan	4,247	9,723	.7
Alberta	3,045	16,522	1.1
British Columbia	107,506	178,595	12.0
Yukon	30	585	—
Total	859,915	1,492,106	100.0

(*—Source; Dominion Bureau of Statistics)

ONTARIO

REPORT

of the

ONTARIO ROYAL COMMISSION ON FORESTRY

1947

TORONTO
Printed and Published by Baptist Johnston, Printer to the King's Most Excellent Majesty
1947

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GLOSSARY OF TERMS

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PROVINCE OF ONTARIO

GEORGE THE SIXTH by the Grace of God of Great Britain, Ireland and the British Dominions beyond the Seas KING, Defender of the Faith, Emperor of India.

TO

MAJOR GENERAL HOWARD KENNEDY, C.B.E., M.C., B.Sc. (McGill)

GREETING:

WHEREAS in and by Chapter 19 of The Revised Statutes of Ontario, 1937, entitled "The Public Inquiries Act", it is enacted that whenever Our Lieutenant-Governor in Council deems it expedient to cause inquiry to be made concerning any matter connected with or affecting the good government of Ontario, or the conduct of any part of the public business thereof, or of the administration of justice therein, and such inquiry is not regulated by any special law, he may, by Commission appoint a person or persons to conduct such inquiry, and may confer the power of summoning any person and requiring him to give evidence on oath, and to produce such documents and things as the Commissioner or Commissioners deem requisite for the full investigation of the matters into which they are appointed to examine;

AND WHEREAS Our Lieutenant-Governor in Council of Our Province of Ontario deems it expedient to cause inquiry to be made concerning the matters hereinafter mentioned;

NOW KNOW YE that WE, having and reposing full trust and confidence in you the said HOWARD KENNEDY, DO HEREBY APPOINT you to be our Commissioner to investigate, inquire into and report upon the forest resources of Ontario and their conservation, management, development and beneficial utilization for all purposes, including but without limiting the generality of this reference the following subjects:

(a) the extent, nature and value of the forest resources;

(b) the methods employed in forest operations heretofore carried on and the forest conditions resulting therefrom;

(c) the improvement of methods of planting, developing, cutting, manufacturing and otherwise utilizing forest trees, the marketing of forest trees and the products thereof, and the development of new products;

(d) the closer integration of the various types of forest operations and of the industries utilizing forest products;

(e) the relation of forestry and forest industries to other basic industries, particularly farming;

(f) the relation of forestry to soil conservation;

(g) the status of woodsmen with particular regard to wages, working and living conditions and the development of forest colonies;

(h) the education and training of forest engineers, forest rangers, scalers and inspection personnel generally;

(i) the education of the public as to the importance of the forests and woodlots in the social and economic life of the Province;

(j) reforestation and research;

(k) the maintenance of an adequate forest-cover with a view to the regulation of moisture run-off and the maintenance of levels of lakes and streams;

(l) waterways and waterpower with relation to forest operations and the manufacture of forest products;

(m) the statutes, orders and regulations under which forest lands are now administered and licensed or made available to private enterprise;

(n) the supervision and administration of forest lands, forest operations and industries utilizing forest products by the Department of Lands and Forests;

(o) all other aspects of forestry; and

(p) all relevant facts relating to any matter into which, in the opinion of you Our said Commissioner, it is necessary to inquire, in order to carry out, fully and effectually the duties imposed upon you, hereunder.

AND WE DO HEREBY CONFER on you Our said Commissioner the power to summon any person or corporation and require him to give evidence on oath and to produce such documents and things as you Our said Commissioner deem requisite for the full investigation of the matters into which you are appointed to examine, by subpoena signed by you.

TO HAVE, HOLD AND ENJOY the said Office and authority of Commissioner for and during the pleasure of Our Lieutenant-Governor in Council for Our Province of Ontario.

IN TESTIMONY WHEREOF We have caused these OUR LETTERS to be made PATENT and the GREAT SEAL OF OUR PROVINCE OF ONTARIO to be hereunto affixed.

WITNESS:

THE HONOURABLE ALBERT MATTHEWS,
LIEUTENANT-GOVERNOR OF OUR PROVINCE OF ONTARIO

at Our CITY OF TORONTO in Our said Province this sixteenth day of April in the year of Our Lord one thousand nine hundred and forty-six and in the tenth year of Our Reign.

BY COMMAND

(Signed) F. V. Johns,
Assistant Provincial Secretary.

To His Honour the Lieutenant-Governor of Ontario.

Sir:

Pursuant to powers contained in "The Public Inquiries Act", Chapter 19, of the Revised Statutes of Ontario, 1937, and in accordance with Letters Patent issued on the 16th day of April, 1946, I was appointed the sole Commissioner to inquire into and report upon certain matters therein set out.

The inquiry has been completed and I respectfully submit this report.

I have the honour to be, Sir, your obedient servant.

HOWARD KENNEDY,
Commissioner.

May 12, 1947.

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PREFACE

In order to prepare this report, sufficient material for several volumes has been accumulated, but it was considered that a voluminous document might defeat its own purpose. Serious thought and effort have therefore at all times been directed towards confining the report to the smallest dimensions consistent with an adequate presentation of the essential information. On account of the importance and complexity of the subject matter, it is felt that no further condensation can properly be made. No official summary has therefore been printed.

Statistics concerning forests and forest industries have been found inconsistent and, in many instances, incomplete but despite this I believe they are sufficiently reliable to indicate the facts fairly, if not accurately.

I have endeavoured to reach sound conclusions and make intelligent recommendations from the data at hand. Where possible, pictorial and graphical, rather than tabular methods of presentation have been used. The pictures reproduced were chosen from among several hundred and, with the exception of two provided by the Reforestation Division of the Ontario Department of Lands and Forests, were all taken by members of the Commission staff. They represent typical rather than extreme conditions of the subject portrayed and should be considered an integral part of the report.

Not only for myself but also on behalf of every member of the Commission staff, it is a pleasure to record my thanks to the many individuals, corporations and both Provincial and Federal Government departments for their willing and cheerful co-operation. which has been of the utmost value in the preparation of this report and without which the task would have been unpleasant and more difficult. To mention all by name would not be feasible; to mention some would not be enough.

CHAPTER I

Introduction

A rational approach to the understanding and solution of any complex problem requires some knowledge of the influences which have had a major share in its development. In this connection, I submit the following narrative concerning the forests of this Province. It is condensed mainly from material appearing in the Annual Report for 1899 of the Clerk of Forestry for the Province, which was reprinted in the Report for 1907 of the Department of Lands, Forests and Mines. The late Mr. Aubrey White, then Deputy-Minister of the Department, assisted in its preparation and a reading of the report in its entirety will amply repay those interested in the early developments in forestry and the forest industries in Canada. It must be kept in mind that prior to Confederation, the forests of both Upper and Lower Canada were under the control of the Central Government. My comments are printed in italics.

French Regime

Under the seignorial system the French Crown granted large tracts of land to individuals who in turn allotted it to tenants under varying conditions, on many occasions including conditions not pertinent to the original grant. The use of the land for agriculture was the dominating feature and the conditions relating to timber were almost negligible. As early as 1683, all oak suitable for the use of the Navy was reserved for that purpose. This regulation was the cause of later difficulty when it prevented the clearing of land. There were many recorded instances where the cutting of such timber by colonists gave grounds for complaint. *This indicates that the conflict between the colonist and the timber holder is not of any recent origin. Only one seigneurie, the Seigneurie de l'Orignal, was located in what is now Ontario.*

British Regime

In 1763 Governor James Murray arranged for the survey of Townships and the setting aside therein of adequate reserves of timber for fortifications and barracks for the Army and Navy and for naval timber, mentioning specifically that the area between Lake Champlain and the St. Lawrence River be set aside as a reserve for "masting for the Royal Navy and other useful and necessary timber for naval constructions." In 1775 Sir Guy Carleton was instructed, "It is our will and pleasure, however, that no grant be made of any lands on which there is any considerable growth of white pines fit for masting for our Royal Navy, and which lie convenient for water carriage, but that you do cause all such lands to be set apart for our use, and proper regulations made, and penalties inflicted to prevent trespass on such tracts, and the cutting down and destroying of the trees growing thereon."

It is therefore apparent that the system of setting aside Crown lands in the Provinces of Ontario and Quebec had its genesis in the needs of naval construction, first for the Navy of France and later for the Royal Navy of Britain.

Early Licenses to Cut Timber

Licenses to cut timber in Canadian forests were granted, by the British Government, to contractors for the Naval Dockyards and there is ample evidence to indicate that they took advantage of the privilege extended to them and carried on a general business of supplying timber to the British market under the guise of operations for the Naval Dockyards.

Protective Tariff

The principals in such contracts appointed local agents in Canada who reaped rich rewards from the trade. The trade was given a tremendous impetus in the early days of the nineteenth century, when the Mother Country turned to Canada for timber after Napoleon shut off her supplies from the Baltic. Later a heavy duty was imposed on foreign timbers as a revenue measure to help pay for the Napoleonic Wars. These duties were afterwards retained with the avowed purpose of protecting and fostering the colonial trade. The statistics of that period indicate that the duty was most effective in curtailing the flow of timber from Europe, particularly from the Baltic States, thereby building up the Canadian export business to a corresponding degree.

Protection of this nature was reduced during the intervening years until in 1846, during the regime of Rt. Hon. W. E. Gladstone as Colonial Secretary, it was reduced to a point where it was presumed to meet only the differential in freight rates between the Baltic States and Canada. This protection was later to disappear, but the Canadian timber trade was by then established so solidly that the export trade to Britain was able not only to meet foreign competition, particularly that of the Baltic States, but even to expand in the face of such competition.

Timber Regulations

There seem to have been no Canadian laws governing the timber trade prior to 1805 when Lower Canada enacted certain regulations, mainly concerning the measurement and floating of timber in the St. Lawrence River. The earliest enactments in Upper Canada appear in 1819 and, strangely enough, refer to the placing of a duty on timber imported from the United States. This practice was extremely popular at that time, as by such methods United States exporters obtained the advantage of the existing colonial preference in the British market. The matter of holding timber suitable for the British Navy was still very much the governing factor, and instructions to the Duke of Richmond, Governor-in-Chief at that time, were very specific as to the setting aside of such reserves.

Forests for Provincial Revenue

It will be observed that up to and including the first quarter of the nineteenth century, the forests of both Upper and Lower Canada were looked upon as a source of supply of timber for the Royal Navy and, incidentally, as a source of profit for the individual privileged to take part in the trade. The country derived no direct revenue in the way of stumpage or rentals, and local enterprise was stifled unless it was under the auspices of an accredited agent of the contractors for the Royal Dockyards. Naturally enough, such conditions created a "black market" in which illicit lumbering operations flourished and this eventually resulted in the abolition of the dockyard contractors' monopoly.

Public Lands Act

In 1826 Sir Peregrine Maitland, Lieutenant-Governor of Upper Canada, directed that British subjects resident in Upper Canada might cut timber in the unsurveyed portions of the Ottawa River watershed.

Introduction of Stumpage Dues and Permits to Cut by Others than Naval Contractors

A series of dues based on the number of logs cut was established. In order to discourage the cutting of immature timber, double dues were imposed on logs which would not square more than eight inches.

In 1827, the Commissioners of His Majesty's Treasury appointed Peter Robinson as Surveyor General of Woods and Forests in the Province of Upper Canada and provided that, in May of each year, he should report what districts contained timber which was not "fit and proper" for His Majesty's Navy and, therefore, might properly be felled by His Majesty's subjects. Auction sales of such lots of timber were provided for and stumpage rates set. Each license was for a quantity not exceeding 2,000 cubic feet. Unfortunately the Surveyor General did not follow his rather explicit instructions and many irregularities were permitted and condoned, with considerable financial loss to the young Province.

Distribution of Crown Lands to Private and other Interests

In defiance of both the letter and spirit of the instructions repeatedly issued by the home Government, the Provincial Government of the day deviated far from the principles of both sound national economy and good business administration. Public lands were widely distributed to favorites and others, causing great harm to the young settlements in that normal development for agricultural purposes of the townships involved was seriously hampered. The dissatisfaction so engendered was to a large extent responsible for the Rebellion of 1837. Lord Durham's exhaustive investigation and report on the existing abuses focused attention on the exceedingly profligate manner in which forest land was dispensed to friends and legislators. Some legislative councillors received grants of 5,000 acres with an additional 1,200 acres for each child, the only cost being the fees paid to officials who drew up the deeds.

The setting aside in Upper Canada of one seventh of the land for Clergy Reserves further aggravated the situation. In one special instance a private company received entire control of 1,100,000 acres of choice timberland in the western portion of the young Province.

The result of the alienation of such large areas of public domain to private ownership was inevitable. Speculators could buy timber, from owners who had acquired these areas, for much less than the stumpage dues charged for an equivalent amount of timber cut on Crown lands. *Schemes for obtaining stumpage-free timber have persisted under the guise of settlement almost to the present day.*

Widespread forest fires, due mainly to land clearing operations of settlers, seem to have persisted throughout this period, with little organized effort to meet the situation. The clearing of land for agriculture apparently was considered much more important than any effort at forest conservation.

Crown Timber Act; Timber Licenses Introduced

A depression in 1847-48, due largely to over-production in the immediately preceding years as a result of a brisk demand and high prices for timber in the British market, resulted in a Select Committee on the Lumber Trade being appointed by the Canadian Legislature in 1849. This Committee drew up the first Crown Timber Act which was passed the same year under the title, "An Act for the Sale and Betterment of Timber Upon the Public Lands".

This Act provided that the Commissioner of Crown lands might grant licenses at such rates and subject to such conditions, regulations and instructions as might be established from time to time by the Governor of the Province, upon the advice of the Executive Council. These licenses were for 12 months only and provided for proper returns of timber cut.

The accompanying regulations specified the sizes of limits, and the Crown dues (stumpage) to be paid, and provided for the renewal of the licenses in question where the holder had complied with the regulations. They also guarded against speculators holding berths by stipulating that, in all seasons not specifically excepted, the operator must cut at least 500 cubic feet of timber or 20 saw logs per square mile of limit on larger holdings, with somewhat higher production on berths of four square miles or smaller.

Ground Rent Introduced

Subsequent regulations, promulgated in 1851, indicate that considerable timber stealing was going on, as stiff penalties were provided for squatters and others taking violent possession of disputed lands and for interfering with surveying, etc. Annual ground rent of two shillings and sixpence per square mile of limit was introduced and provision made to assure the payment of dues for timber slidage and Crown dues generally.

Export Levy on Unprocessed Wood

Logs exported from the Province (presumably to the United States) were assessed at double rates of Crown dues on domestic production.

Separation of Forest Lands from Agricultural Lands Recommended

That forest fires were a matter of grave concern a century ago is evidenced by the introduction of a Bill, during the Session 1854-55, for the protection of the forests and preventing the setting of fires to the woods for the purpose of clearing lands. This Bill was dropped, due to the setting up of a Select Committee with its terms of reference "To examine and report upon the present system of management of the Public Lands and the various dues arising therefrom, together with the present mode of selling, leasing and otherwise disposing of the same, to report thereon with all convenient speed, with power to send for persons, papers and records." Conflicting testimony before this Committee emphasized the clash of interests between the operators producing square timber and the sawmill operators, and between those interested in the sale of land and those interested in perpetuating the forest. For the first time the folly of allotting typically forest land to settlers, allegedly for agriculture, was thrown up in relief. The separation of forest lands from agricultural lands, by means of forest surveys, and the prevention of timber-mining by pseudo-settlers, were even then advocated but have never been adequately controlled. *Much has* *been accomplished since 1921 in the control of the practice of allotting timber lands for farming, but further remedial measures are required, mainly the completion of the survey advocated 90 years ago, as a result of which typically forest lands will be set aside in perpetuity for the growing of forests.*

Hardwoods

The attitude towards hardwoods on the part of pine operators at that time was forcibly expressed before the above Committee by one witness, James Henry Burke of Bytown, as follows:

> "But mark this co-incidence! Surrounding this pine territory and contiguous to the great lumber fields is the large area to which we have alluded, possessing a fertile soil and timbered with hardwood. This timber has not the value of pine, and its destruction is not a national loss."

If any considerable proportion of these hardwood stands remained to-day, they would form the backbone of huge furniture, flooring and handle industries which now have to import raw materials from the United States or from Eastern Quebec and the Maritimes.

The Select Committee apparently did not get to the point of making recommendations, but referred the evidence to the Legislature and suggested another Select Committee of the House at the next meeting of Parliament.

Subsequent Orders-in-Council seem to have been aimed, mainly, at emphasizing the fact that the payment of ground rent did not create a vested right which would preclude the imposition of new conditions or of increased payments for rentals or Crown dues.

Squatters and Timber Stealers

Great embarrassment was caused by the squatters and timber-miners in the late 50's and early 60's. Unwise regulations helped to destroy much good timber in that, although a settler might cut down and burn timber for land clearance, he could be treated as a trespasser if he sold it. Timber stealing was widely practiced and dealers were known to allot contracts up to 100,000 cubic feet of hewn timber to individuals who did not possess any timber-holdings from which it could be produced.

A Select Committee was appointed in 1863 to enquire into the rapid destruction of the forests, but the time at their disposal was too short to go thoroughly into the subject. Another Committee, appointed the following year to complete the work, never made any report. Representatives of the industries involved were prominent on the Committees.

Confederation

With Confederation in 1867, among the subjects coming exclusively within the scope of Provincial Legislators was "the management and sale of public lands belonging to the Province and of the timber and wood thereon."

Although there is evidence that much thought was given to, and a diligent search made for, a remedy for the problems besetting land settlement and forestry in the Province, the matter seems to have been side-tracked for various reasons.

Hemlock Bark Export

A symptom of the destructive forest exploitation of those days is portrayed in an enquiry, set afoot in 1868, during which a Select Committee of the House of Commons studied the shipment of hemlock bark to the United States for tanning purposes. It indicated that some 100,000 cords of bark were exported annually from Canada and that in providing this, 10,000 acres of forest were denuded and the timber left to rot on the ground, constituting a fire hazard when the bark has been removed. The Committee in its report recommended an export tax of $1.00 per cord on hemlock bark to curb the drain on the forests, pointing out that each area involved would be cut out in 10 to 12 years, leaving the community without a continuity of income from tanbark production. Petitions to the Government by exporters and interested parties killed the efforts of the Committee and with them the hemlock forests of Ontario and Quebec, as the Government decided to take no action. The interested operators at the time brought out the arguments of the exporters: employment provided, wages distributed, impetus to other industries, etc.

Export of Sawlogs

Another Select Committee of the Provincial Legislature of 1868 dealt with the export of sawlogs, shingle-bolts and stave-bolts, but it does not appear that they ever rendered a report. The interests involved in export appear to have been extremely well served in the Legislatures in this country as well as in the United States.

A Select Committee of the Dominion Parliament in 1874 painted the export duty on sawlogs as a protection for Michigan timber operators, a detriment to Canadian settlers and as only of slight benefit to the Canadian sawmilling industry, with the result that the export duty on stave-bolts and oak logs was removed in 1875.

The export duties on shingle-bolts, spruce logs and pine logs were altered at various times in the 80's and after a bit of what might be termed "horse trading" between the sawmill operators and the log exporters, the Government announced in 1891 that the export tax on logs to the United States was removed. The same year the duty of $1 per M. on Canadian lumber was also abolished, and free trade in lumber and logs between Canada and the United States came into existence. This happy condition had existed only a couple of years, when a business depression set in in the United States and a duty of $2.00 per M. was again imposed on rough lumber from Canada. This acted as a protection for the Michigan operators, who increased their imports of logs from the Lake Huron Forests of Ontario to be sawn in the United States instead of the lumber formerly imported from Canada.

The pleas of the Ontario lumbermen, particularly those from Western Ontario who were hardest hit, were finally heeded and in 1898 the Provincial Government passed regulations providing that all logs cut on Crown lands should be manufactured in the Province. United States operators immediately claimed breach of contract on the part of the Government and that, in any event, the regulations were ultra vires of the Provincial Government. The case was heard in 1899 with judgment in favour of the Province.

Northwestern Ontario

Lumbering in Ontario was at first mainly centred in the Ottawa Valley and on streams flowing to Lake Ontario and Lake Erie, but the rapid development of the sawmilling industry necessitated a westerly expansion, and in 1871 the Muskoka-Parry Sound area was opened up for the sale of timber licenses. The following year the industry spread along the north shore of Lake Huron and flourished for some decades, though there are few units now left of that tremendous development.

The areas then leased supported thriving communities until a bit after the turn of the century, but the reckless exploitation carried on inevitably destroyed the industry. In general, the history of lumbering, not only in Canada but also in the United States, has been that few areas once opened up have lasted more than 25 to 30 years, when the vast majority of timber-miners have had to seek new horizons, usually leaving desolation in their wake. It is true that a few concerns have been more far-sighted and reasonable in their treatment of the forest and have remained in business in the same locality for generations. Unfortunately, the number of such operators is only too small and their experience has been the exception rather than the rule.

Diameter-limit Introduced

The first appearance of a diameter-limit in cutting regulations occurred in 1871 when, by Order-in-Council, a minimum diameter of 13 inches on the stump was decreed. The only species being cut in quantity in those days were the white and red pines, white spruce, oak and hemlock (for bark).

Floating of Logs and Timber Marking

Owing to the floating of logs by various operators in the same streams, "An Act respecting the Marking of Timber" was passed in 1870. Regulations were made to prevent the duplication of marks and severe penalties provided for misappropriation of timber so protected.

For a considerable period, rival operators disagreed widely regarding the use of streams, as the operator who had originally improved the river by the removal of rocks from rapids, the construction of booms, piers, slides, etc., claimed prior and sometimes exclusive rights. Since previous legislation had not clarified the situation, "The Streams Bill", passed in 1881, provided that all operators might use such improvements and have passage along the banks of any drivable stream, upon the payment of proper tolls. The schedule of these tolls was to be approved by the Lieutenant-Governor-in-Council.

A test case concerning these rights (McLaren and Caldwell) was fought in 1881 and, though the Dominion Government disallowed "The Streams Bill" each time it was presented by the Ontario Government in 1881, 1882 and 1883, an appeal to the Privy Council by Caldwell was settled in his favor in 1883 and the Bill, when again presented to the Dominion Government in 1884, was allowed to stand until replaced by a more comprehensive Act in 1887. Since then there has been little alteration in the legislation covering the joint driving of streams.

Ontario Cullers Act

An Act for the licensing of cullers, adopted in 1890, provided for more adequate returns and standardized methods of measurement.

Forest Fires

The forests of Ontario seem to have been plagued by fires from the earliest days of settlement and reports to the various Governments concerning the matter appear as early as 1849 and at intervals from then on. In the report of Mr. P. M. Partridge, Superintendent of Woods and Forests, under date of 1859, the question of forest fires was forcefully drawn to the attention of the Government of the day, particularly in view of the very extensive prospecting operations for gold which appeared imminent.

Nothing much seems to have resulted from the complaints made at that time and all efforts were then directed rather toward suppression than prevention.

In 1878, "An Act to Preserve the Forest from Destruction by Fire" was passed which contained many of the clauses necessary for preventing the setting of fires, but it proved to be difficult to enforce due to a lack of organization.

It was only in 1885 that a fire-prevention organization, consisting at first of only 39 rangers, was inaugurated but from this modest beginning it has expanded tremendously in size and efficiency with the years.

Beginning of Pulp and Paper Industry

Exploitation of the forests of Ontario was confined to lumbering and the production of tanbark, ties, poles, etc., until after the turn of the century when the utilization of wood for the manufacture of pulp began to assume considerable proportions. The opening of the Temiskaming and Northern Ontario Railway in 1903 and the construction and operation of the Grand Trunk Pacific through the northern Clay Belt shortly afterwards, gave a great impetus to the production of pulpwood and to the construction of mills in Northern Ontario.

Agricultural Land for Settlers

Since the days of the earliest settlements in Ontario, records indicate that, though the lumbering or pulp and paper industry invariably forged ahead of settlement, the cutting operations were always closely followed by some genuine settlers who intended to stay on the lands. Unfortunately, in addition to this stable group, there was always a host of pseudo-settlers or timber-miners who apparently had little or no intention of remaining to cultivate the soil. They quickly stripped the farms allotted to them and passed on to new allotments, generally leaving waste and desolation in their wake. Until comparatively recent years little effort was made to confine their activities to land which could possibly be maintained in agriculture after its forest cover was gone. One has but to look at the annual sales and free grants of land to such so-called settlers, with the accompanying cancellations of lands previously allotted, to see the widespread ramifications of this development which might well be described as a "racket". (See diagram, page 146.)

> A Select Committee in 1863 reported and recommended:
> "It appears from the evidence that settlement has been unreasonably pushed in some localities quite unfit to become the permanent residence of an agricultural population. Especially has this been the case on some of the Free Grant roads and adjacent country, lying between the waters of the Ottawa and Lake Ontario. Your Committee would refer to the evidence and recommend that the Government should, in all cases, ascertain positively the character of the country before throwing open

> any tract of land for settlement, so that such lands that are really not fit for profitable cultivation may not be thrown upon the market. There being considerable diversity of opinion among the witnesses in regard to some of the localities adverted to, it seems to the Committee that the Government should have an examination made by some thoroughly competent and reliable officer, whose report would be available in any further consideration of this subject."

This question which was reported on over 80 years ago has never resulted in the over-all survey recommended though, with the passage of years and the increase of the drain on the timber resources of the Province, it was and still remains one of the crying needs of forestry.

General

It is timely to note that the history of forest operations in this Province, with few exceptions, has been that of "cut out and get out."

The white pine stands of the Ottawa Valley now support only a handful of operators, whereas in the hey-day of that area over a billion feet of white pine was produced per year. It will take upward of a half century to restore the pine industry of that area, and then only if vigorous and comprehensive restorative measures are taken.

The white pine and red pine forests of the Georgian Bay district are no more and it is doubtful if they are likely to be, or indeed can be, restored in any measure approaching the density or quality of the original stands. They, along with the equally valuable stands of the north shore of Lake Huron, disappeared in about three decades with a very considerable portion of the raw product exported to the United States in the form of unprocessed logs.

The Trent Valley watershed and adjacent areas, once one of the finest white pine areas in the world, now present hundreds of thousands of acres of wasteland as mute testimony to man's extravagant methods of exploitation.

There were large areas of white and red pine west of the Great Lakes, but these too have disappeared. A few small areas remain only because of their inaccessibility under the methods practiced when the stands surrounding them were removed.

The preference of pulp mills for spruce will similarly remove that species as a major component of our forests unless remedial measures are taken. The damage is not yet irreparable, but the present state of our former pine forests indicates the need for amended treatment of remaining conifer stands; otherwise we shall not hand on to succeeding generations forests which will approach in quality or quantity the virgin stands which are now being cut.

In case the foregoing words have given the impression that forest industries, in the past, have been the chief cause of forest destruction, it should be emphasized that settlers and private owners of woodlots, with due allowance being made for their capabilities and facilities, have practiced less in the way of reasonable forestry methods and conservation than have the larger commercial operators. Some of what are potentially the most productive, but actually the worst managed forest lands, are in or adjoining the earliest settled portions of the Province. Since these lands are close to the consuming market and have the best growth and moisture conditions, they present possibilities for an exceedingly profitable field in the matter of reforestation and management.

The history of the past hundred years in this Province indicates that most of our forest problems have existed in one form or another throughout this period. The number of Commissions and Committees set up to enquire into these various problems, without appreciable result, demonstrates that something more than a Commission of enquiry is needed. It is apparent that public apathy, selfish interests of individuals and sometimes political expediency have, in the past, all had a share in delaying the rational utilization of our forests.

I cannot end this chapter more suitably than by quoting from a report of a Special Committee of the Legislature in 1863. It indicates the necessity for publicity before any change in forest policy is made by the Government.

> "Your Committee . . . would further recommend that wherever even any minor change in regulations may be thought advisable, it should be published for at least three months before any Order-in-Council be passed to give effect to it, so that the Trade may have an opportunity of being consulted in regard to the change contemplated."

If the word "Public" were substituted for the word "Trade", the above recommendation would fit the needs of the present day. An enlightened public on guard against unwise exploitation of its forest resources is the influence most likely to assure the perpetuation of these resources for future generations.

CHAPTER II

Commission Organization and Activities

Letters Patent creating the Ontario Royal Commission on Forestry were issued only on April 16th, 1946. I had commenced work, however, on March 11th. An organization had to be set up, a staff gathered together, office premises found, office equipment purchased and plans and arrangements completed for the field work which, if not under way early in May, would not have been completed in the same year.

After a long search, satisfactory head office accommodation was obtained in the Administration Building of the Small Arms Plant at Long Branch, and the following staff was appointed:

PERSONNEL

Legal Counsel	Donald Guthrie, K.C.

Head Office

Office Manager and Accountant	R. P. Egerton, C.A.
Secretary of the Commission	Major W. H. Hewson, B.A., LL.B.
Secretary-Steno to the Commissioner	Miss M. E. Edmondson
Stenographer	Miss A. Cory

Field (Mobile Office)

Four Forest Engineers	E. S. Davison, M.F. J. F. Turnbull, B.Sc. F. J. Miles Gibson, D.Sc., O.B.E. E. S. Fellows, M.Sc. F.
Field Clerk and Stenographer	S/Sgt. A. Barry
Field Draughtsman	A. Dudman
Cook	

In addition, the Department of Lands and Forests of British Columbia, for the period May 17th to August 1st, loaned to the Commission the services of E. W. Bassett, B.A.Sc. (For.), their officer in charge of fire protection. His services were invaluable in the study of fire protection methods, personnel and equipment. He has keen powers of observation, and his advice on many other phases of the work, in addition to fire protection, was often sought and freely given. The Royal Commission is indeed grateful to the Minister and to the Deputy Minister of Lands and Forests of British Columbia for Mr. Bassett's services.

The Royal Commission also sincerely appreciates the action of Purdue University, Indiana, in granting leave of absence to Prof. Lloyd VanCamp, a former Canadian and graduate of Toronto University, now Extension Forester there and an acknowledged expert in matters pertaining to farm woodlots. He ably assisted the Royal Commission in organizing and carrying out the farm woodlot survey. His counsel, vast knowledge of the subject and genial personality were of great importance in this phase of the work of the Commission.

Brigadier George M. Grant, now Assistant General Manager of the Bell Telephone Company and formerly officer in charge of the Royal Canadian Electrical and Mechanical Engineers Corps (R.C.E.M.E.) of the Canadian Army in Europe, has rendered outstanding service in assisting the Royal Commission in studying the administrative organization of the Department of Lands and Forests. The Royal Commission is indebted to the Bell Telephone Company for making his services available, and to Brigadier Grant who was unsparing of his time and unsurpassed organizing ability.

APPROACH TO PROBLEM

Throughout the whole course of my inquiries, the guiding purpose which I have kept steadily in mind has been the attainment of "Total Forestry", which I would define as the complete utilization of the forest resources of the Province for the greatest use and enjoyment of its people.

It was realized at the outset that the narrow concept of forestry, namely the growing of trees and the removal of wood products in various forms, has influenced the public viewpoint to the almost total exclusion of the other very important functions which the forests must perform in the rational development of the social and economic life of the Province. Forests are the main factor in controlling stream flow, in preventing floods and erosion, in maintaining soil water levels—a matter of increasing concern in much of the agricultural area of the Province—and in providing a habitat for most of the wild life of the Province. This latter function is basic to the recreational values of our countryside and, if neglected, tourist enterprises which are potentially so valuable to Ontario will never reach their optimum development. It is quite feasible to have forested areas close enough to centres of population so that all classes, particularly children, may have an opportunity of enjoying them. In addition, it may be demonstrated that they are a profitable investment in the economic as well as in the social sense.

The closer co-ordination of various basic industries such as agriculture, forest industries, mining, hydro-electric development and tourist activities was visualized. What has happened in the past shows that much can be done to eliminate waste and provide a more rational and co-ordinated development of these resources which are, or may become, important to more than one Government department dealing with the above industries.

It was ever kept in mind that the vast bulk of our forests, whether or not leased for varying periods to forest industries or operators, still belongs to the Crown or, in other words, to the people of the Province. The majority of these real owners live in communities remote from any of the larger forested areas. For this and other reasons they have so little opportunity of seeing or using their forests that they do not comprehend their ownership and the responsibility involved. Even those who live in, or on the fringes of the larger forested areas seldom appreciate the importance of perpetuating their resources.

Finally, there had to be faced the problems created by many operators with selfish interests, whose development programmes and outlook do not go beyond a decade or two and whose practices are detrimental, not only to the general public, but also to themselves.

It was, therefore, with some knowledge of existing conditions, yet with high hopes of finding means to improve them, that the Royal Commission embarked on and carried out its studies of the forests of Ontario.

FIELD WORK

A Canadian National Railways colonist car was converted to a mobile office by removing six sections at one end and installing desks, filing cabinets and a draughting table. The remainder of the car was utilized as sleeping and living accommodation.

At each location at which the car stopped, the District Forester had a tent erected which served as cookery and dining room for the Commission staff and as living quarters for the cook. Cooking utensils, china and food were carried on the car. Beyond the normal difficulties encountered in obtaining and retaining cooks, the living and working arrangements left little to be desired.

Stops varying in length from eight to fourteen days were made at the following points: Pembroke, Temagami, Shebandowan, Minaki, Sioux Lookout, Armstrong, Geraldton, Orient Bay, Mobert, Oba Lake, Moonbeam, South Porcupine and Biscotasing. Shorter stops were also made at Kawene, Mine Centre and Hearst.

These locations were chosen because they provided siding facilities close to suitable flying bases for pontoon-equipped aircraft, thereby making feasible a complete coverage of the forested areas of the Province.

At all times the Commission had at its service one aircraft, with an extra one on some occasions, provided by the Provincial Air Service. Without this method of transportation, it would have taken several years to complete the work done by the Commission staff between May 6th and September 20th.

Map No. 7 indicates the specific areas inspected by the Commission staff. Where there were roads and motor transport was available, inspections were made by this means. Sometimes only boats or canoes could be used, but the vast majority of inspections were made by means of air transport to the vicinity and travel on foot to and over the area inspected.

It will be noted that all forested areas of the Province were covered, from Quebec to Manitoba and from the American boundary to the Severn River in the north.

The engineering staff of the Commission flew in all weather, only requiring that the hill-tops be visible. On many days, in order to deliver the various members to their different destinations, ten or twelve ascents and descents were made, on and from water usually unfamiliar to the pilots. The fact that neither aircraft nor personnel were injured in the hundreds of landings and take-offs speaks volumes for the efficiency of the Air Service.

Not all camps of all operators were visited, but some member of the Commission staff visited a sample of woods operations of every large or medium-size industrial concern in the Province, whether it be engaged in the manufacture of pulp and paper, the production of lumber, the cutting of ties and poles, or the export of pulpwood. In the case of the large companies, operations on each of their limits were inspected. Not only were recent cuttings examined, but those of past seasons were checked for evidence of new growth and the cutting practices utilized. Where their history could be ascertained, old cuttings of 20 or 30 years ago were included in the survey, as were also old and recently burned areas in both cut-over lands and virgin forest.

Inspections were made in a uniform manner and reported on standard forms. Consequently, the Commissioner or any member of his staff would observe and report on the same elements, whatever area was visited. Each report called for observations on operating practices; waste (such as high stumps, large tops left, timber felled and left on ground, timber left standing which should have been cut, etc.); labour conditions, including housing; indications of efficiency or otherwise; the compliance with or neglect of regulations; any evidence of fish and game and the tourist possibilities; the type of roads and equipment; the number of men employed, etc. Normally, scalers who had previously measured wood in the area acted as guides and in order that a fair sample should be shown to the Commission, the particular areas or camps to be inspected were not arranged beforehand but were selected by the engineer making the inspection on the date of the inspection.

Many hundreds of photographs were taken. These are all catalogued and copies have been attached to the reports concerned.

In addition to field inspections, the Commissioner and members of the Commission staff have visited the wood preparation plants of every pulp and paper mill in the Province, nearly every sawmill sawing more than one million feet board measure per annum, many smaller sawmills and the two pole and timber treating plants operating in Ontario. Notes on the equipment and processes of all plants were made.

One result of this effort has been the compilation of probably the most complete and up-to-date data that has ever been assembled on the methods, processes and equipment of the wood-using industries of Ontario and the resources which supply them.

Throughout all the survey work involved, the matter of urgency was the keynote. It was felt that the field work *must* be completed before the winter set in and that the report *must* be prepared with the least possible delay. Only the most loyal co-operation of the field staff made possible the completion of the survey during the open season. They devoted practically every Sunday and every legal holiday to inspections, usually being in the air by 8.30 a.m. and spending about 10 hours per day in the field, often more. Notes were written at night. I mention this service here as I feel that such unstinted devotion to duty should at least be drawn to the attention of the government.

WOODLOT SURVEY

In addition to the above survey of operations on Crown lands, three Commission engineers spent seven weeks travelling by road, separately, over the southern portion of Ontario inspecting farm woodlots in every County. Government officials, County Councils, County Assessors, personnel of wood-using industries and interested individuals were questioned. Accordingly, a splendid over-all picture was gained of the conditions existing and the remedial measures already undertaken; in addition, some ideas were obtained as to the measures which should be undertaken in the future to meet the challenge presented by the existing state of this most important element affecting the future prosperity of this Province.

PUBLIC HEARINGS

Scheduled Public Hearings commenced on October 28th. Meetings were held in Sault Ste. Marie, Port Arthur, Kenora, Fort Frances, Geraldton, London, Cochrane, North Bay, Pembroke, Ottawa and Toronto.

The Commission sat for 39 days, 142 briefs were presented and well over half a million words were taken in evidence. The response of the public was gratifying and much useful information and many sound recommendations were received.

CHAPTER III

General Impressions and Observations

One cannot spend a season in an intimate study of the forests of the Province, and the manner in which they are being operated and administered, without forming some broad general impressions which are relevant to any report on existing conditions and recommendations made to improve them.

WASTEFUL METHODS

The most striking impression made on the staff of the Commission has been the tremendous, almost incredible, waste resulting from single-purpose operations carried on in the past and still being carried on by most of the operators. Few sawlog operators produce pulpwood occurring in the stands they cut over. (In fact, many of their leases or permits do not allow them to do so.) Few pulpwood operators cut sawlogs occurring in their pulpwood stands, except to a very limited degree for their own use. (Again, many of their licenses do not permit them to cut sawlogs.) Much material of pole and tie size, and eminently suitable for these purposes, together with pulpwood and sawlog material, is therefore left on many areas widely scattered across the Province. In a number of cases, the material remaining is not sufficient in quantity to justify an economical separate operation later and, in any event, the trees so left usually die of sunscald within three to five years, or are blown down and form a fire hazard.

Pulpwood operators tend to concentrate on spruce, for two reasons:

(1) Pulp and paper makers prefer spruce, particularly black spruce, because of its high yield and strength and its satisfactory behaviour in manufacturing processes.

(2) Pieceworkers on woods operations prefer black-spruce-swamp stands because the trees are rarely very large, are reasonably uniform in size and are free from heavy limbs; from swamp stands there is a high yield in cords per acre and consequently the potential earnings are high.

In addition to the main reasons cited above there are secondary reasons, such as an ill-founded belief amongst Ontario operators that extremely high sinkage losses occur in balsam. There is also the woodsman's dislike for handling green balsam on account of its gummy nature which soils hands and clothes much more than either spruce or jack pine. Jack pine does not find favor amongst paper makers except in the manufacture of kraft and, particularly in this Province, its use has not been widely developed in making other pulps and papers.

The following tabulation based on the annual returns of the Department of Lands and Forests for 1945-46 indicates the percentages of coniferous pulpwood species cut in this Province and the percentages exported, compared with the percentages existing in the forests of the Province as revealed by the Report of the Forest Resources of Ontario, prepared in 1930.

	Total Stands	Total Cut	Cut for Export
Spruce	63.3%	81.7%	81.0%
Jack pine	27.7%	11.6%	12.1%
Balsam	9.0%	6.7%	6.9%
	100.0%	100.0%	100.0%

This indicates a heavy overcut of spruce, with a corresponding undercut in jack pine and balsam. In many mills in Quebec and New Brunswick, balsam constitutes over 40 per cent of the pulpwood supply and, in some cases, almost double that percentage. Sinkage losses are higher than in spruce but not high enough to deter the companies concerned from using the full balsam content of their various stands. The percentage of jack pine utilized in the manufacture of groundwood pulp is much higher in mills outside the Province than in mills in the Province of Ontario. Jack pine utilization in some newsprint mills in Canada exceeds thirty per cent of the groundwood pulp content.

Excessive Waste in Road Building

The advent of the bulldozer in road construction has ushered in an era of waste from that source. Few woods operators now clear the right-of-way before construction and, as a result, excessive waste is caused and potential fire-hazards created. Workmen do not like to work in the resultant tangle because it slows their rate of production and the sand and earth embedded in the tree trunks

Excessive waste from bulldozing a road before cutting the right-of-way. (Pulpwood-exporting company operation.)

Excessive waste beside a truck road. (Domestic paper company operation.)

dulls their tools. Hundreds of miles of road exist with waste material similar to that shown in the accompanying pictures. Clearing of the right-of-way before bulldozing should be rigidly enforced.

DISTRIBUTION OF CROWN LANDS

The illogical allocation of Crown lands to operators has also made a marked impression. In many instances, timber areas held by operators have little relation to the present needs of the units of industry concerned. Some have much more than their mills, as presently constituted, can possibly use while others, particularly the vast majority of the sawmilling group, can foresee their extinction due to lack of timber in periods of time varying from two to 25 years.

Areas containing much, if not most, of the remaining stands of timber suitable for sawlogs are included in pulpwood concessions. Areas of timber, certainly not yet overmature, are now being cut over for pulpwood to be exported in an unmanufactured state; while some domestic mills whose future with respect to wood supply is far from clear, within a measurable period will have to transport wood from more remote regions beyond the areas now being cut over for export. The cutting of quantities, far beyond the actual annual growth under current silvicultural practices, is common on many limits, particularly amongst the sawmill group and the export group. Conversely, other large areas of limits are not developed to an extent approaching their possible sustained-yield because the present manufacturing capacity of the limit holders concerned cannot utilize the annual growth of such large areas.

The practice in Ontario, and elsewhere, of allotting limits in rectangular shapes, instead of conforming to single watersheds or groups of watersheds, frequently prevents the logical and economical development of a considerable portion of the area involved because of its location on a watershed which does not naturally serve the mill concerned.

Throughout the years there has been no enduring policy concerning the leasing of forest lands to the various interests. Political expediency at times seems to have entered into negotiations and at all times the bargaining capacity of the units of industry or commerce concerned has made itself apparent. The diversity of the clauses and conditions in the leases, under which the Department of Lands and Forests now staggers, will be treated in Chapter IX.

The bald facts are that it was formerly so easy to get annual permits to cut timber, without assuming the financial and other obligations entailed in the holding of timber areas, that many operators acquired the rights to cut over forest lands on a shoe-string basis and did not realize, until it was too late, that pulpwood concessions and reserves had been granted on such a scale that there was little timber-land left available, except in the northwestern portions of the Province on the waters of the English and Albany Rivers.

A casual glance at a map may induce some to think that there are still vast untapped forest resources in the far north. True, there are still considerable areas not yet exploited, but their extent is not nearly as great as many believe. From Hudson and James Bays westward there are tens of thousands of square miles of desolate waste swamp-land of the kind graphically portrayed in the two accompanying plates. Here, poor drainage rather than extreme climatic conditions is responsible for the absence of forests of commercial value. Moderately good

Sub-arctic swampland on the James Bay Coastal Plain near the Attawapiskat River. The dark patches are pools of stagnant water, the rest is moss. There are thousands of square miles of swampland similar to this.

Sub-arctic swampland. Note how the drainage provided by the small stream on the left induces some scrubby tree-growth near its banks. Even if accessible such timber would be valueless for commercial purposes.

timber grows in fringes along the water courses, but this deteriorates progressively as the distance from the banks of the streams increases until, at about one-quarter of a mile back from the shore, only worthless scrub exists. Thirty-five miles from the mouth of the Albany River, spruce up to 27 inches in diameter was observed in the narrow strip of timber near the water, but the tenuous nature of these fringes is such that their exploitation is out of the question, at least for many years to come. Even if it ever becomes feasible to exploit them, they will yield comparatively little wood.

ABILITY OF THE FORESTS TO RECUPERATE

Another striking impression gained is that of the tremendous capacity of the forests to heal the wounds made by both man and nature. It is amazing how the appearance of once devastated areas changes in a quarter of a century. Given a chance and a little assistance, nature can largely correct most of the damage done to our forests, except in the case of red pine and white pine. Outside the Ottawa Valley and areas which may be planted in Southern Ontario, it is unlikely that these species will predominate over any considerable area of the Province within the next century.

LACK OF ROADS

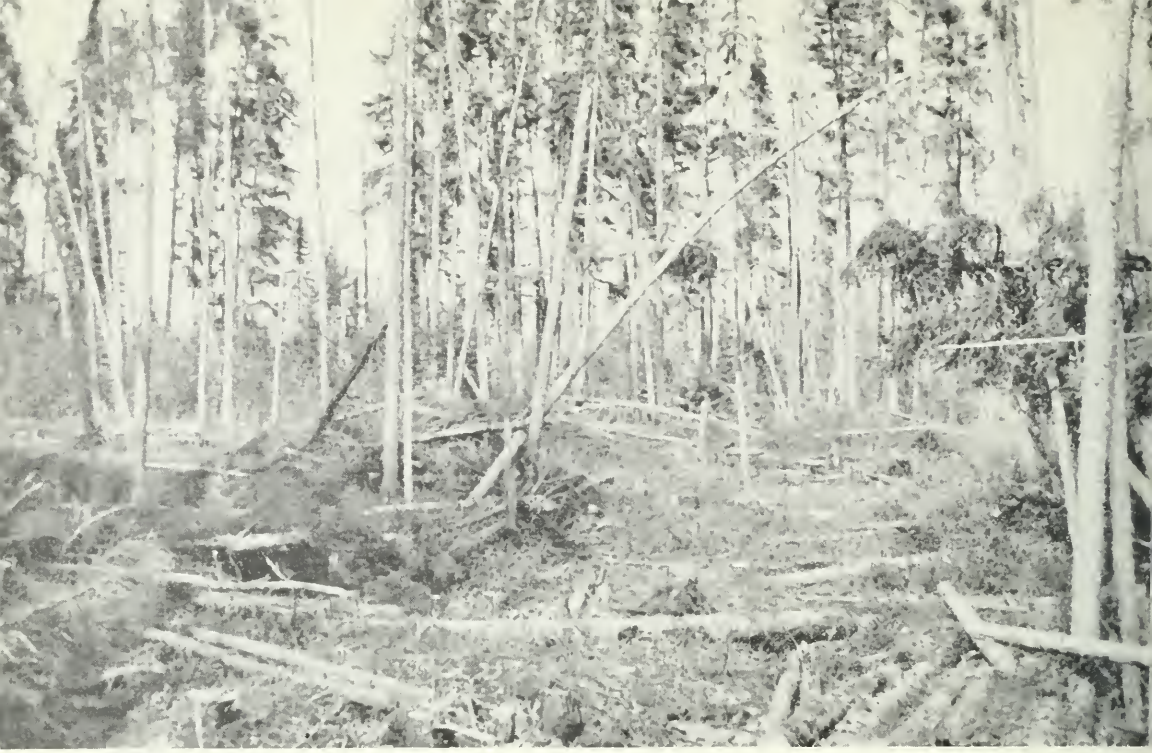
Mention of the lack of roads necessary for rational development of the forests cannot be neglected. Without a tremendously expanded road system, we cannot hope to practice sound silvicultural methods. In the past, due to the fact that forest industries in Ontario have depended almost entirely on water transport for wood delivery, operators have perforce cut only the conifer species which will float. Further than that, practically all operators, whether their needs were for sawlogs, pulpwood, ties, or poles, took only the sizes and species of conifer in which they as individuals happened to be interested. This has resulted in a tremendous upset of the original balance of species, and quantities of both hardwoods and softwoods have been left to blow down or die of sunscald. The overmature or otherwise weakened stands, in turn, have left the forests a prey to fire and insects as it is such stands which constitute some of the highest hazards of insect epidemics or fire, or both.

I recommend that a widely expanded road-building programme, jointly agreed upon by the Departments of Highways, Agriculture, Mines, Lands and Forests, and Travel and Publicity, be undertaken with the aim of opening up every major watershed. Unless trunk road systems are provided, we cannot hope to utilize anything approaching the maximum output of our forest areas in wood products, or to reap the greatest advantages in recreational and tourist activities.

SAWMILL SITUATION

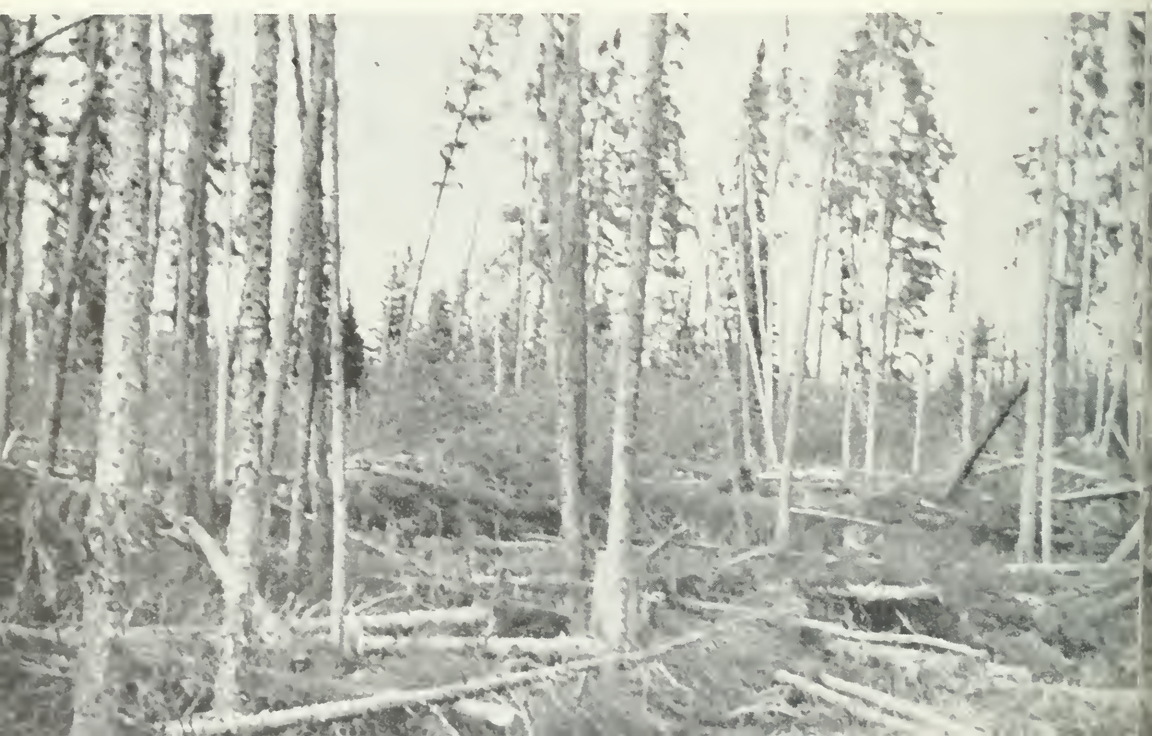
Evidence as to the precarious position of the lumber industry has been presented by the Chief of the Timber Management Division of the Department of Lands and Forests and by many of the lumbermen concerned. Not more than two or three per cent in number (representing between twenty and thirty per cent of the annual output of lumber) of the 1,147 licensed sawmills in the Province have sufficient limits to permit of sustained operations at any figure

Jack pine suitable for ties and poles left standing after a spruce pulpwood cut. These trees will die and be blown down. (Domestic company operation.)



Merchantable pulpwood left after cutting. Note the abandoned pile-bottom (lower right).
(Pulpwood-exporting company operation.)

Merchantable pulpwood left standing. (Pulpwood-exporting company operation.)



approaching their present output, unless remedial measures are taken. The remainder of the mills, with the communities dependent upon them, can only await extinction, with casualties commencing at a very early date. A solution of this problem will be suggested.

PULP MILL SITUATION

In relation to their individual long-term requirements, the supply of wood from this Province for domestic pulp and paper mills varies widely.

Some mills, in the past, have been dependent on other Provinces for a large, if not a major proportion of their pulpwood. In some instances, this wood is transported past mills outside Ontario which are themselves in short supply. Shipments of wood from other Provinces may at some future date be curtailed or stipulations may be imposed which could effectually reduce, or even eliminate this source of supply. If such an occasion should arise, mills in Ottawa, Hawkesbury, Cornwall, Thorold and Merritton may be forced to curtail production to such a degree that the communities would suffer most severely.

A few domestic mills are known to have limits which appear to provide little or no opportunity for a future increase in production. In some cases, areas have been leased, under agreement to pulpwood exporters, which would have furnished the logical and economical source of raw material to provide for such expansion. Only a complete survey of the forest resources of other mills will disclose their position.

A few mills obviously have more than enough area under agreement to permit of continuous operation on a much larger scale. Curiously enough, one of these companies has agreed in its contract not to increase the capacity of its mills. Another company has ample, indeed more than enough, area to sustain its domestic mills, but its privilege of exporting an amount equal to its domestic consumption could result in the rapid impoverishment of its limits if such consumption were to expand to any considerable extent.

POLE AND TIE OPERATORS

There are two pole and tie treating plants now operating in Ontario. They are largely dependent for their raw materials on agreements made with limit holders producing pulpwood or sawlogs. This prevents long-term arrangement for continuous supply, as such agreements cannot normally be made more than a year or two in advance. One timber treating company has limits, but they are insufficient to produce, in perpetuity, any quantity of material commensurate with probable future requirements.

I believe that supplies so vital to the operation of our railways, hydro networks and communication systems should be organized on a perpetual basis, and recommendations to that end will appear later in this report. I want to emphasize here that much material, eminently suitable for sawlogs, poles and ties, is now diverted to other uses or is left to die and decay after single-purpose operations.

BALSAM CONTENT IN FUTURE FORESTS

There is no escape from the impression that past and present cutting practices in Ontario will result in a higher percentage of balsam for the next cutting-cycle

Small timber cut for sawlogs. Compare with pieces in pulpwood piles on page 104.

High-grading in pulpwood cutting. Note the patches of mixedwood in the foreground and the scattered hardwood left standing through the cut-over area. (Pulpwood exporting company operation.)

than is now present. Current industrial utilization does not approach full use of the balsam content of the original stands, let alone the higher percentage almost inevitable in the future. The spruce budworm prefers mature balsam stands and epidemics normally originate there, followed by extremely disastrous losses. The result of possible future epidemics of this pest can only be more serious as the balsam content of the forest increases. A better balance between species than is indicated by current reproduction is therefore a prime necessity.

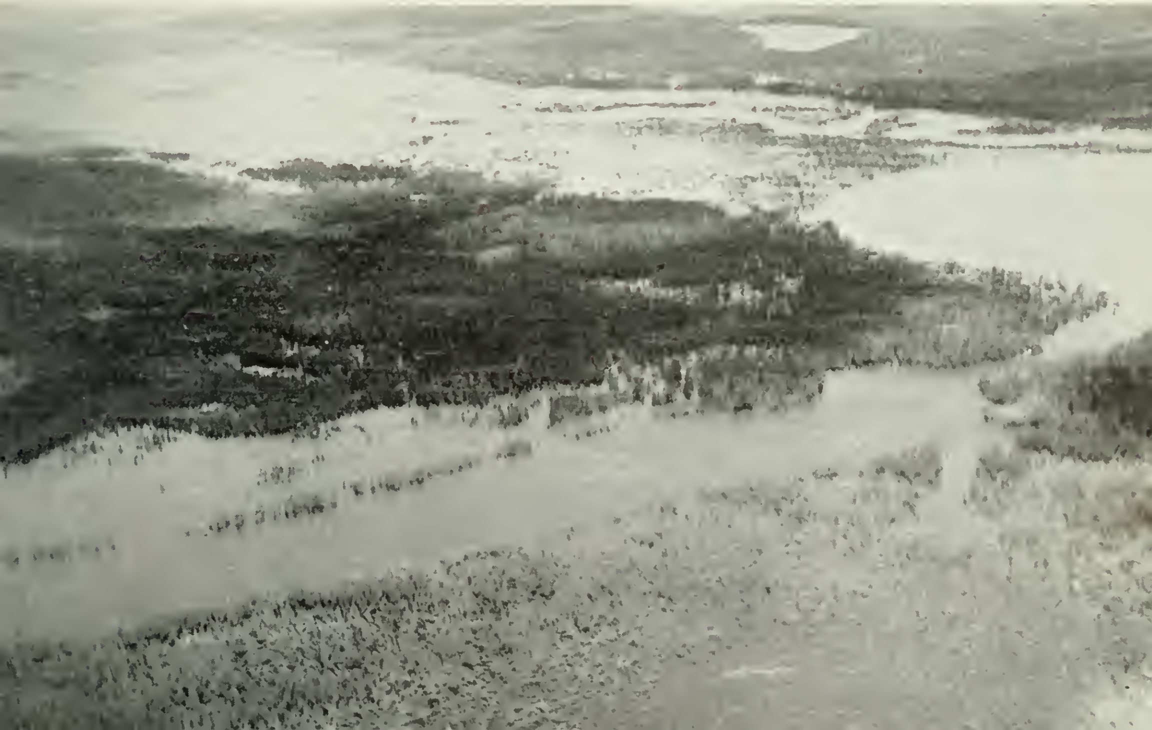
PROVINCIAL AGENCIES WASTEFUL OF FORESTS

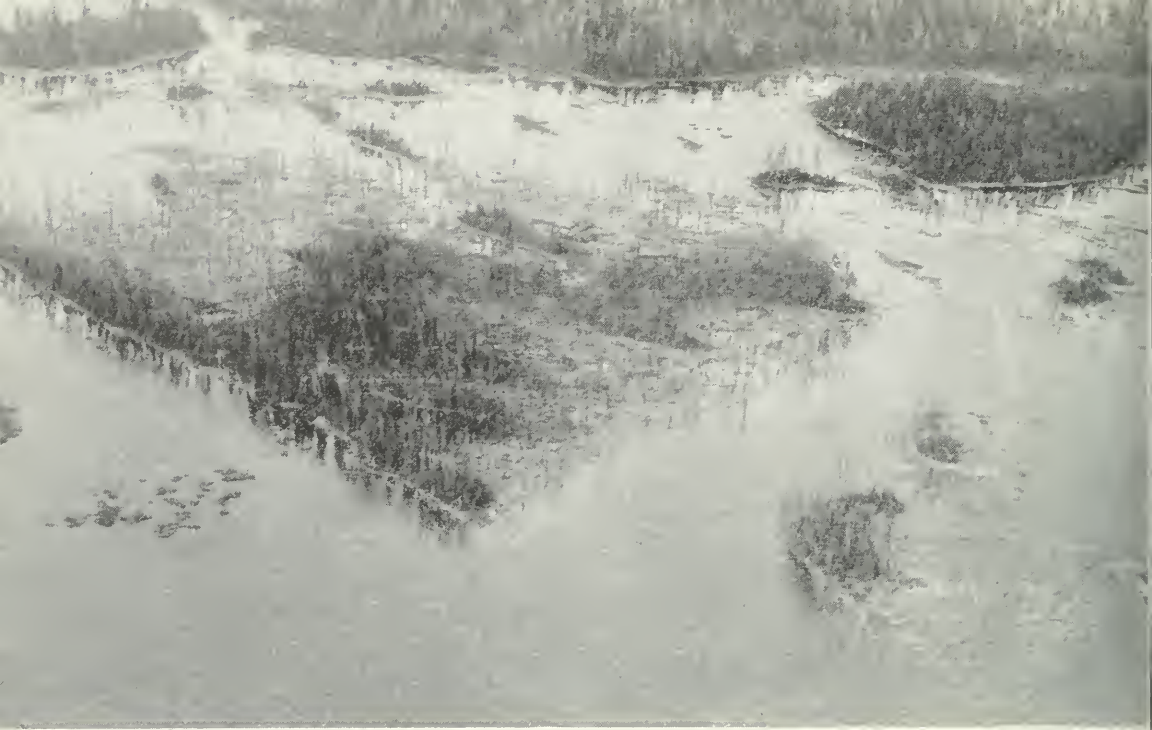
I regret to say that the Hydro-Electric Power Commission of Ontario has not applied ordinary forest conservation practice, except to a very limited degree, on most of its major projects in the last quarter of a century. Failure to clear trees from the site of storage reservoirs before inundation, which might have been insisted upon by the Department of Lands and Forests, has resulted in considerable loss of timber and, worse still, has left unsightly and dangerous tangles of tree trunks and debris covering tens of thousands of acres. These wooden barriers will remain for several decades, a menace and an expense to recreation seekers and forest operators who may wish to use these waters.

The story has varied little with the passing years. Lady Evelyn Lake, north of Temagami, dammed in 1925, Montreal River (Algoma District), Marmion (Moose) Lake at Steeprock, Lac Seul, Long Lac, Ogoki Reservoir, all bear evidence of the same lack of consideration concerning conservation of timber, aesthetics, and economy of future forest operations.

I consider that works of a public nature should set a high example to private industry in matters of forest conservation but such has not been the case. Limit-operators, in general, have similarly left uncleared the areas to be inundated by dams for the control of stream flow for driving operations.

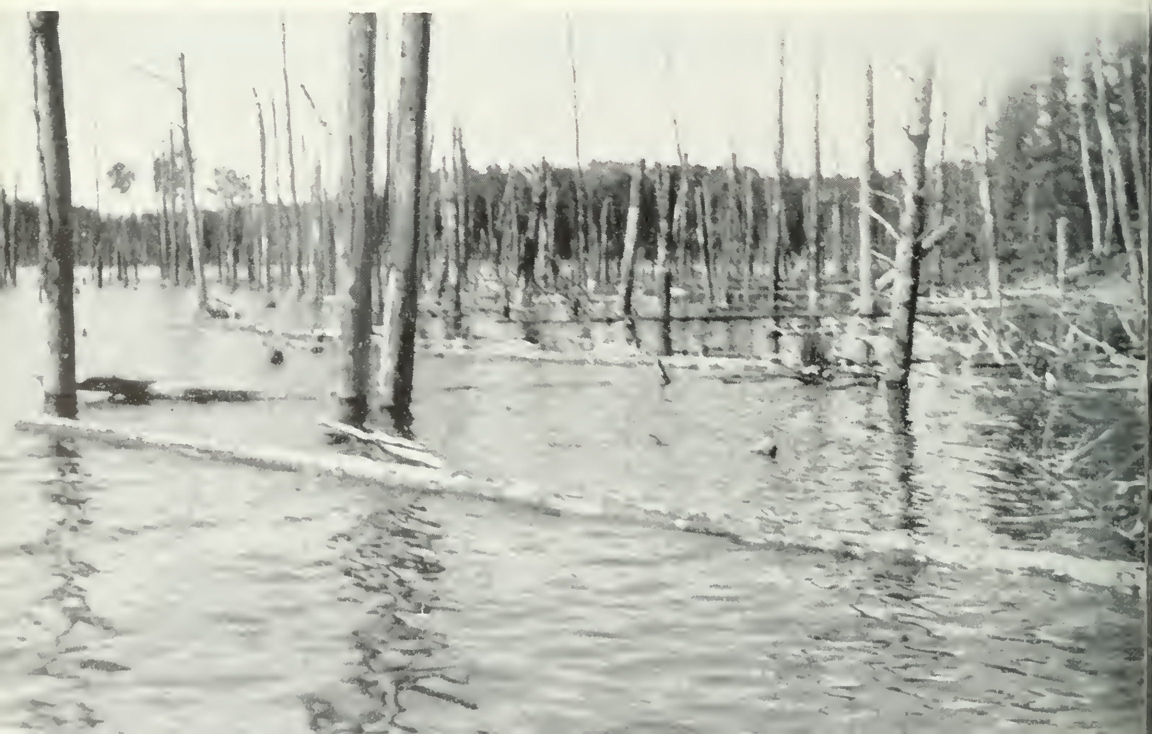
Submerged area, Ogoki storage reservoir. Many square miles are submerged in this manner.

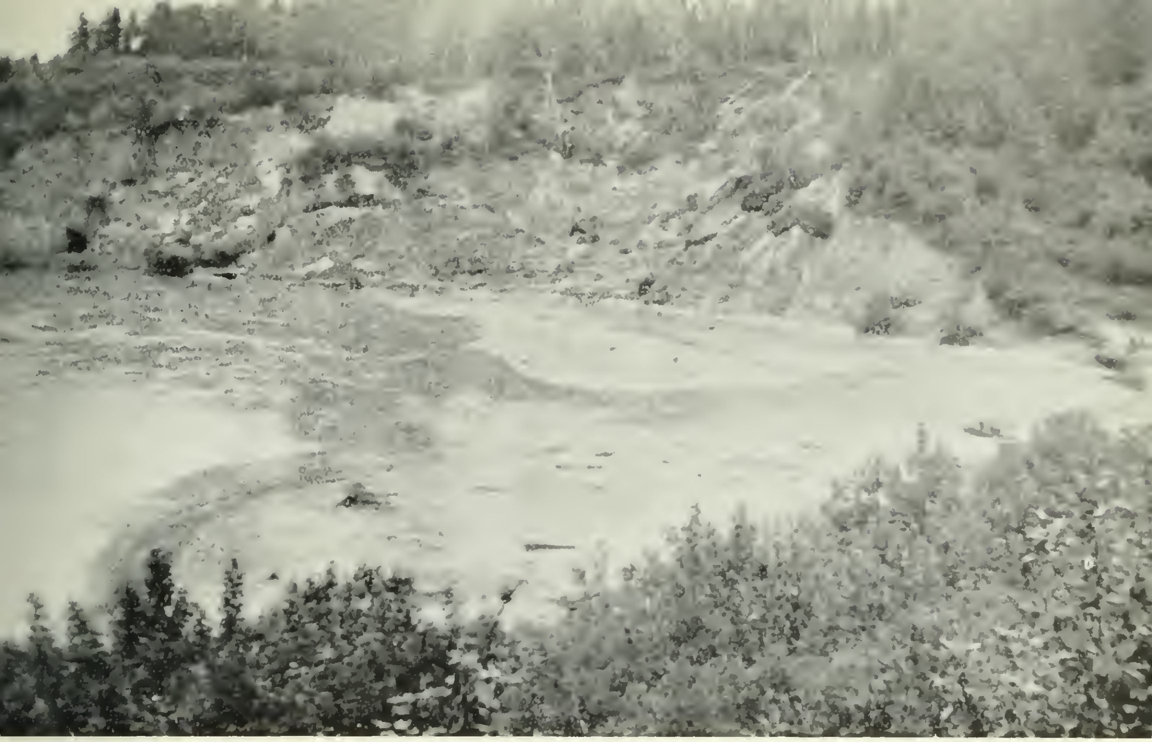




Submerged area, Lady Evelyn Lake power storage-reservoir after twenty-five years of inundation. Debris of this nature will remain for many decades.

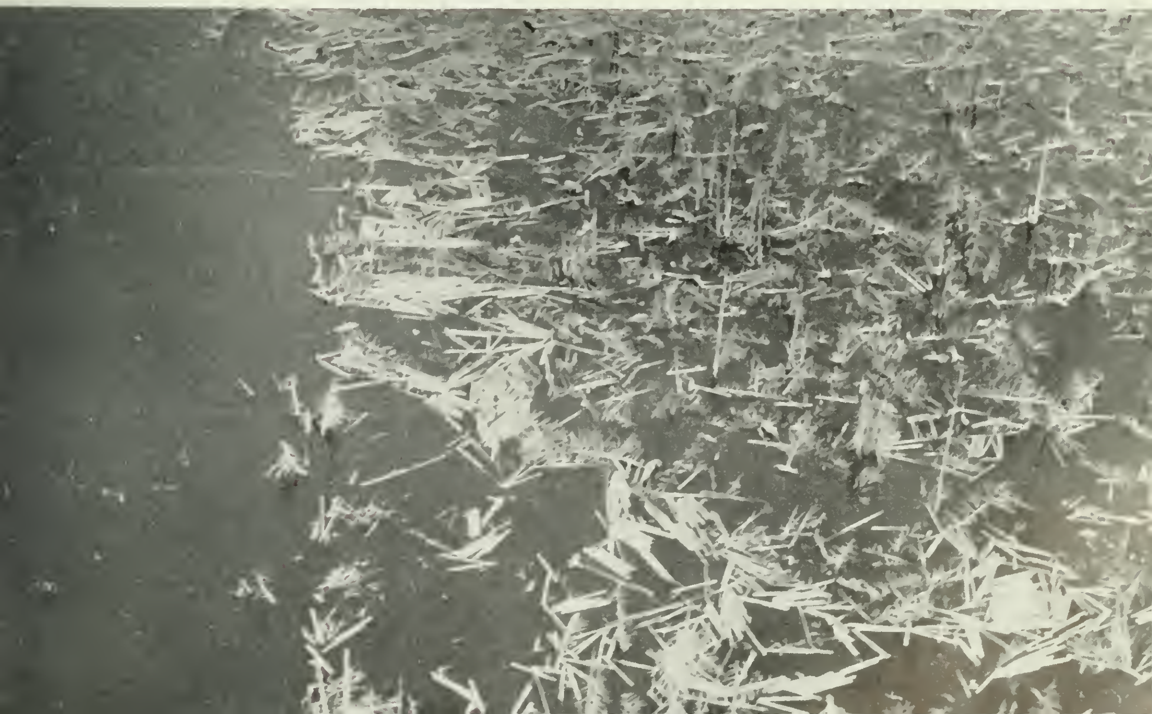
Typical view of the shoreline of McKenzie Bay, Lac Seul. Such shores make landings with aircraft or small watercraft impossible except on calm days. Flooded in 1927.





Landslide on the Little Jackfish River. The bank is cut back over 200 feet at this point. Ogoki Diversion.

Submerged area above a log-storage dam, Opikinimika River. Note the logs scattered amongst debris.



Calm Lake Reservoir. A close-up view of the debris along the shore. Flooded in 1927.

Submerged area, Wakami River, caused by a dam built to facilitate log driving. Flooded in 1928.

OPERATIONAL CONDITIONS AFFECTING FORESTRY

There are many ills affecting forest operations on Crown lands. There is, in general, a tendency to blame everything on the operator. In my opinion this is far from fair, for the following reason.

Up to the present time, the general public has ignored or failed to comprehend the fact that only by sensible and rational utilization of our forest resources can we hope to maintain the forest industries and their dependent communities in perpetuity. This failure by the general public to appreciate the situation has been reflected in government and industrial forest policies, or the lack of them. If sensible and uniform laws and regulations are provided and uniformly applied, the great majority of operators are, I feel, ready and willing to implement them fully. Severe penalties, again uniformly applied, will rapidly bring the reluctant operators into line.

In most of the larger units of forest industry in this Province, organization, financing and planning have been directed toward the production of raw materials and the processing, manufacture and sale of finished products. On the other hand, the renewal of the forest resources, the lifeblood of the enterprises concerned, has been largely left to chance.

The main reason for this situation is that few top executives of the major components of our forest industry have had any training, either academic or practical, in the operation of forests. In general, they have achieved their dominant positions in the industry by way of mill operations, finance, sales or accounting. The result is that so long as wood is made available they continue to concentrate on production costs and sales and, beyond the cost and the assurance of an immediate supply of wood, pay comparatively little attention to the operations of the forest. I gained the impression that a majority of top executives have carried out few inspections of their woods operations and that in most cases any inspections which were made were a by-product of their occasional visits to the company hunting and fishing lodge on the limits rather than for the purpose of a critical analysis of forest conditions affecting labor and the efficient utilization of effort and material.

It is customary for companies to appoint a Vice-President in charge of Woods or a Woodlands Manager, who has risen to the position through forestry or wood-production activities. His work includes planning, government contacts, attendance at industry and association meetings and conferences, and entails responsibility for policy and personnel matters. He normally becomes so submerged by such activities that he has little time to visit the woods and is lucky if he can call at branch headquarters once or twice a year.

Next in line comes the local Divisional Manager. He, in turn, is harassed by varied problems of management and construction, labor, personnel, supply and estimates, income tax deductions and, during the War, the multiplicity of returns occasioned by rationing and Selective Service. He may get to his headquarters depots once or twice during the cutting season but he is fortunate if he can visit the odd camp, where the cutting is being carried on, even once during the season.

The result has been that in most cases production quotas have been allotted to the various camp foremen who have been held responsible for their fulfilment. They have done their best under the circumstances but if the forest must suffer in order to produce those quotas, then the forest, rather than the quotas, feels the effect. That such is the case is borne out by the fact that widely varying conditions may normally be found in adjoining areas operated by the same company. This was apparent in all parts of the Province.

I am convinced that senior executives, who demand the highest standards in housekeeping and prevention of waste in their mills, would be horrified if they were to travel over their cut-over areas and see the waste of material and effort in the woods.

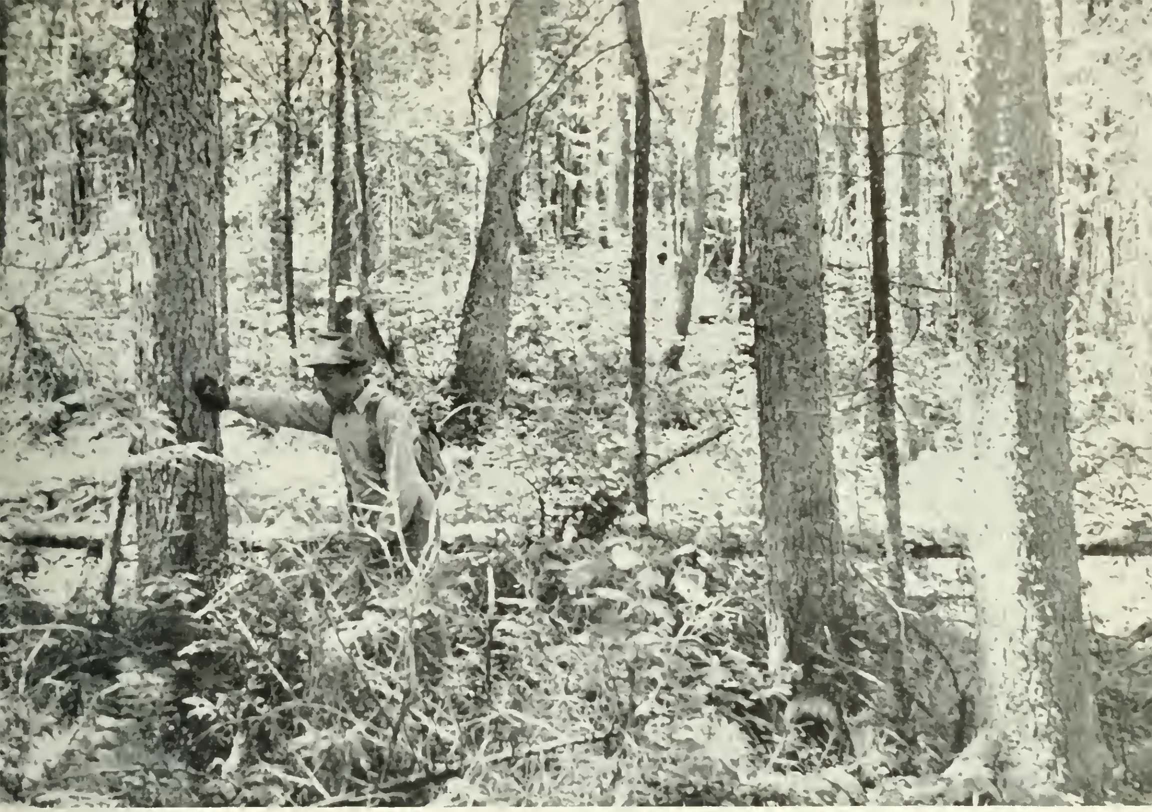
The solution lies in an increase in supervisory staff, both technical and practical, probably on a scale amounting to four for each one now employed. I am convinced that on most operations three times the money spent in tripling or quadrupling the supervisory staff would be returned in savings due to the elimination of waste effort and waste material. The government should urge all senior executives of forest industries to give thought to the disparity between the numbers of men supervised on woods operations by one superintendent or one foreman, as compared to the numbers of men whose work is supervised by a similar foreman in the mills. It will be found that while one foreman in the mill has probably thirty or forty men working in a closely knit group and under shelter, his bush counterpart has one hundred or more men spread over several square miles of forest and exposed to the elements over which he has no control. A snowstorm or rainstorm may easily cut the efficiency of a working crew in half.

More time-studies, technical control and supervisory staff are sadly needed in the forests and their provision can be made to pay big dividends. Much, if not most, of the poor forestry practice now carried on would thus be eliminated, because practically all the wasteful practices can be demonstrated to be unsound economically.

So that my reasons for writing the above critical paragraphs regarding forest operations may not be misinterpreted, let me reiterate my previous suggestion that abuses exist because an informed public opinion does not insist that government policy demand a more rational development of our forest resources. My acquaintance amongst industry executives and operating personnel is wide and I believe that the vast majority of them, if given practical and uniform laws and regulations, uniformly applied, would heartily subscribe to and observe all measures which will perpetuate and improve our forest resources.

NEED OF CO-OPERATIVE EFFORT

An important impression that I wish to record is that created by the apparent hostility, bordering on distrust, evident between the different groups of forest industries and even between members of the same group. The lack of co-operative effort is unsound and costly, and results in much waste on operations due to lack of interchange of products. Concerted efforts to eradicate this unfriendliness would pay worthwhile dividends.



Waste resulting from poor supervision of cutting. Two thirteen-inch and two twelve-inch spruce trees left standing by piece-workers within fifty feet of a skidway on a sawlog operation.

Government and industry should endeavour to achieve a greater spirit of mutual trust and confidence. A wider and freer exchange of ideas would be beneficial to both groups.

PERSONAL CONTACTS OF DEPARTMENTAL OFFICIALS WITH DISTRICTS

As the distance widens between Toronto and the outlying districts, there is evidence of a lack of personal contact between Head Office staff and the District staffs, which is more or less proportional to the distance of the latter from Toronto. Shortage of personnel is probably the main reason why this lack of contact persists. Whatever the reasons, they should be eliminated, and frequent visits of several days, not hours, should be made by all senior staff at Head Office to *all* Districts. When these visits are made they should be of the nature of field inspections, rather than calls at the District Offices.

This subject will be developed in a later chapter.

ADMINISTRATIVE CONDITIONS AFFECTING WOODS OPERATIONS

It would appear from the foregoing that there are many things which need correction administratively. These will be covered later in some detail. At this point, however, I should like to pay a tribute to the staff of the Department of Lands and Forests. With very few exceptions they are an intelligent, capable and industrious group of men who deserve great credit from the people of this Province.

They are, however, sadly inadequate in numbers and badly overburdened with administrative problems. Senior personnel lack trained assistants who can carry part of the load, particularly the routine administrative detail which must be performed if chaos is not to result. This applies to District Foresters and Chief Rangers. Forest Rangers, in many cases, have overlapping duties to do with scaling, fire protection and fish and game activity. In addition, the added (necessary) burden of re-assessment of all government lands has laid an extra administrative load on ranger personnel, which will interfere with their normal duties for several years to come. Scaling and inspection work generally, which is really the core of all timber management endeavour, cannot but suffer as a result of the extra burdens placed on an already inadequate staff of scaling personnel.

Many, if not the majority of, scalers have now reached or passed middle age and can no longer hope to do the amount of bush travelling on foot which is required of such personnel. Only a much widened programme for the training of scalers, and salaries which will attract bright young men into the trade, will bridge the present gap that exists between the numbers of scalers needed and the numbers available.

CHAPTER IV

Forest Industries*

It is not my intention to compare the forest industries of Ontario with other basic industries in the Province. I consider the forest industries sufficiently impressive in themselves. In any case, the statistical data on the forest industries, though similar, are not strictly comparable with those on the other basic industries.

It is customary to look upon lumbering and pulp and paper manufacturing as constituting the forest industries and, in general, to disregard the production of ties, poles, Christmas trees, etc. Nor is proper attention given to the number of industries using wood and paper which are dependent upon, and would never have been developed except for, the production in their proximity of the necessary raw materials. All these groups will be treated in appropriate chapters of this report.

The thought might well be put forward that the tourist business and fish and wildlife enterprises should be classed as forest industries and I believe that future developments will make this classification logical. For the purpose of this report, however, they will be considered in a separate chapter.

EFFECT OF WAR ON FOREST INDUSTRIES

The war years and years immediately following the war is not a wholly satisfactory period to use in an analysis of industry. The dislocation and difficulties which result from war are recognizable, and possibly some of their effects should be noted.

The pulp and paper group, whose product was marketed mainly in the United States, were under rigid government controls as to prices, production quotas and mill salary and wage schedules. The lumber group, particularly the larger permanent mills, suffered even greater dislocation of their normal routine; they were forced to sell one-half to two-thirds of their output in local markets at rigidly fixed prices, which in many cases were not reflected by overall costs and did not allow a proper differential between the different grades. The inevitable result was that the older and more reputable operators were penalized to the advantage of the owners of the smaller temporary mills and the less scrupulous operators, many of whom, with the connivance of black market customers, could and did flout the price ceilings by the manipulation of grades and by under-measurement. The mill salaries and wage schedules of the lumber group were also closely controlled, though in some mills wage controls could be evaded by paying wages at piecework rates.

Until recent months, woods labor earnings have borne little resemblance to established wage ceilings and, as is usual when the anchor is gone and the vessel allowed to drift, results have been most erratic. The operators cutting pulpwood for export have played a major role in the ascending piecework spiral which has reached a point where I consider it threatens the continued well-being of the primary forest industries of the Province.

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*Pulp and paper mills and sawmills are shown on Map No. 11. Distribution of private and public lands is shown on Map No. 8.

For several years past, rising piecework rates included bonus payments previously unheard of, such as those for deep snow encountered, cutting of strip-roads, cash payments for trips home, etc. Few, if any, operators were able to avoid being caught up in the spiral which now permits pieceworkers to earn $12.00 to $15.00 in an 8-hour day, with corresponding day-labor rates pegged at $6.20 per day. The inevitable result has been that work on a day basis has almost vanished and piecework rates have been established for practically all phases of woods effort. This has created some most undesirable conditions from the standpoint of forestry and conservation.

For instance, the production of sawlogs has been traditionally and properly on a daily or monthly wage basis because quality of product is of greater economic importance than quantity of output. Care taken in sawing up the felled tree can produce not only more lumber, but higher-grade lumber than may otherwise result. A majority of the sawlogs produced under piecework conditions throughout the Province are merely 16-foot sections of tree, with little thought given to minimizing curves or other defects.

The more undesirable, but nonetheless necessary woods jobs remain undone because the high piecework rates for cutting permit men to earn all they desire under present income tax laws. An increase in rates for the less desirable work will again start the ascending spiral for cutting rates.

I mention this subject again in Chapter XVI on Woods Labour. It is discussed here only because of the relative effect of piecework on the major primary forest industries.

EMPLOYMENT PROVIDED

During 1945, some 42 pulp and paper mills in Ontario gave work to approximately 12,000 employees and paid $26,500,000 in salaries and wages.

In the same period, 1,147 licensed sawmills in the Province gave work to approximately 7,000 employees and paid a little over $7,000,000 in wages and salaries. Sawmills in Ontario are usually operated for about six months in the year or less, as open water is necessary for transporting the logs to most of the mills.

It is difficult to make an accurate segregation of the data on the different industries carrying on woods operations in Ontario. In 1945-46 they collectively employed upwards of 29,000 seasonal workers, practically all males. Up till July, 1946, many prisoners-of-war were included in this figure. Wages paid amounted to roughly $44,000,000 for the season (brief of Ontario Forest Industries Association). In addition, some thousands (estimate 7,000—brief of Canadian Pulp and Paper Association) were employed on private lands producing pulpwood valued at $11,000,000 for domestic mills and export.

In addition to these primary industries, there are secondary industries with nearly 2,000 plants using pulp or paper or lumber as the primary raw material and, though some of these would continue in operation whether or not their primary industries within the Province were closed, it is safe to say that the vast majority are in Ontario because of the supplies of local raw material available. These secondary industries provide work for upwards of 51,000 men and women and their payrolls approximate $75,000,000. Secondary industries using wood range from establishments manufacturing furniture to those producing coffins, tool handles, fruit baskets and even stepladders; those utilizing pulp or paper cover the field from printing and book binding to the manufacture of pie plates. Furniture establishments alone number 208, employ 7,842 men and women with an annual payroll of over $11,300,000 and turn out products worth $29,000,000.

Summary of Employment

	Primary Industries	
19,000 employees	payrolls	$ 33,500,000
	Woods Operations	
29,500 employees (seasonal)	payrolls	44,000,000
	Secondary Industries	
51,000 employees	payrolls	75,000,000
99,500		$152,500,000

EFFECT ON AGRICULTURE

Not only do the primary forest industries offer healthy and gainful employment in the woods to spare off-season farm labor, but they purchase large quantities of farm produce. This amounts to about $16,000,000 (Ontario Forest Industries Association brief) in a normal year and includes fresh and canned meats and vegetables, flour, butter, lard, hay and oats, etc.

EFFECT ON HYDRO DEVELOPMENT, TRANSPORTATION AND INDUSTRY

The primary forest industries are larger users of hydro-electric power in the Province than any other group, spending roughly $4,000,000 for that purpose. They pay transportation systems tens of millions of dollars, which constitute a very considerable proportion of the railway revenue, and it goes without saying that their purchases of machinery, chemicals, mill supplies and fuel are similarly impressive.

If, by any mischance, these tremendous forest industries should be seriously curtailed, it can readily be seen that within the industry many thousands of employees and their dependents, as well as many more thousands in agriculture, transportation, hydro and industry generally, will suffer severely.

CAPITAL EXPENDITURES AND FIXED CHARGES

Pulp and paper mills require tremendous capital expenditures before they can produce a single ton of pulp. They are often located far from centres of population and whole towns, with all amenities, have to be constructed, in addition to the mills. An expenditure of $50,000 to $60,000 or more per ton of daily capacity is not unusual (400-ton mill $20,000,000 to $25,000,000) before it is possible to produce pulp or paper. The investment in mills forms one of the fundamental differences between pulp and paper operations and lumber operations. In the former case, the cost of the mill far outweighs the costs of the limits and the facilities for producing wood. In the latter case, the investment in limits and facilities to deliver logs may easily be greater than the cost of the mill.

The factor of mill investment has a profound effect on the probable course of action of the two industries when production falls to a low ebb. The pulp and paper mill has such a burden of capital investment that, with high fixed charges for taxes, interest on securities, maintenance and depreciation, it will probably continue to operate until the loss per ton of production exceeds the fixed charges. This was exemplified during the depression years in the early thirties. The only mills to close were those which were units in a group where production could be transferred to and carried on more cheaply by other mills in the same group. The single mill, once established, cannot afford to close until unit losses exceed unit fixed charges.

On the other hand a sawmill, not having so much overhead, can reduce production drastically and even close down completely for a season, without necessarily going into bankruptcy. Such action, however, is most undesirable and causes a grave dislocation in the affairs of all concerned, particularly the wage earner.

A comparison of the trends in the two major primary forest industries in Ontario is interesting and possibly instructive. The pulp and paper industry will be dealt with first.

PULP AND PAPER INDUSTRY

In 1917, the total production of the pulp and paper industry was 873,043 tons. By 1941 this had reached a peak of 2,861,958 tons and in 1945 was 2,736,478 tons. The number of establishments reached a peak of 45 in 1926 but had dropped to 42 in 1946.

In 1920, Ontario was producing 33.4% of all pulp and 46.2% of all paper in Canada, but in 1944 the corresponding figures were 25.0% and 28.5%, indicating that production in other provinces has overcome the early lead established by the mills in Ontario. Development of a large export trade in pulpwood has undoubtedly had a share in this failure of Ontario to hold its dominant manufacturing position.

In 1920, the average output of pulp and paper per mill in Ontario was approximately the same as the average for the Dominion. By 1945, the combined output of pulp and paper per mill in Ontario was roughly 68,400 tons a year as against 91,400 tons for the Dominion. The average annual production per employee in Ontario mills was 234 tons compared to 249 tons for all the mills of the Dominion. Earnings of employees in Ontario averaged $2,051 compared to $2,012 for the Dominion. Wages per ton of production (pulp and paper mills combined) were $8.78 as against the national figure of $8.08.

The wood costs of Ontario mills are, on the average, higher than those of Quebec mills. To a limited extent this may be due to the heavy transportation charges on wood coming in from other provinces. A comparison of the cost of wood delivered at Ontario mills in 1945 with the cost of wood delivered at Quebec mills in the same year indicates a differential of more than $1.50 per cord in favour of that delivered to Quebec mills. In past years I have had good opportunities to observe operating conditions, particularly the factors of roughness of terrain, difficulties of providing forest roads, water storage and improvements,

Spruce butt 16 inches in diameter found under a brush heap where it was hidden because it was too heavy to handle. (Pulpwood exporting company operation.)

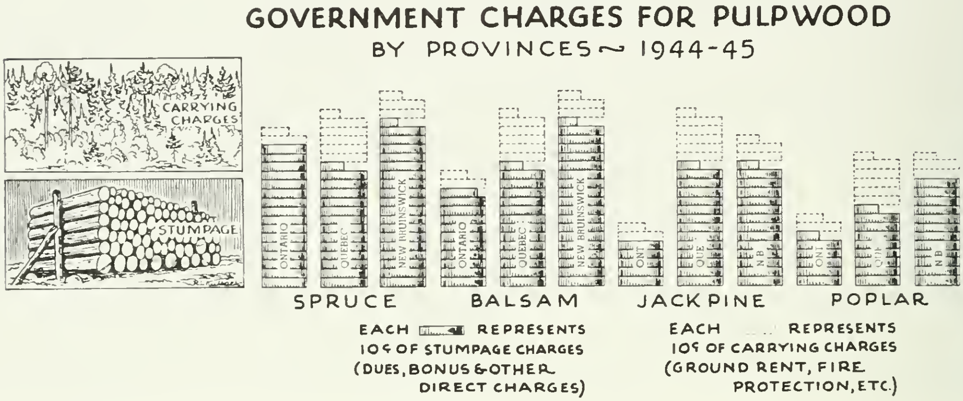
in all parts of Quebec. My past summer's study in Ontario's forests has convinced me that, in comparison, the average conditions are more favourable in Ontario. Ontario's wood should arrive at its mills more cheaply than wood produced in Quebec for her mills, and the Dominion Bureau of Statistics figures indicate that a differential in favour of Ontario of $1.10 per cord did, in fact, exist in the early 1930's.

In my opinion, the extra costs are due to the less efficient operating methods, resulting mainly from the piecework system widely used. This system of cutting wood in eight-foot bolts requires the clearing of strip-roads approximately 660 feet in length and 12 to 20 feet in width for each acre stripped. These roads are in addition to all main hauling roads and constitute, themselves, a most expensive item in production costs. Strip-roads parallel one another about 60 to 70 feet apart, so that the woodsman can carry logs to the piles beside them. Carrying logs 10-12 inches or more in diameter and 8 feet 4 inches long, in a worker's arms or on his shoulder, is most uneconomic and could in most cases be performed much more cheaply by mechanical power or by horses. With pieceworkers earning well over $1.00 per hour, manual labour of this nature is difficult to justify. It is back-breaking labour for the individual; consequently many large bolts are buried out of sight under brush heaps because of their weight.

The clearing of the roads necessitates deep piles of brush between them, which seriously interfere with advance-reproduction growth.

On both silvicultural and humanitarian grounds, **I strongly recommend abandonment of the cutting of eight-foot pulpwood. If ground is too soft for mechnical equipment or horses, then I recommend that bolts be not longer than four feet, with narrower strip-roads more widely spaced.** Smaller areas may be left until frost has solidified the swamps.

Dues on balsam and jack pine pulpwood are much lower than in Quebec or New Brunswick. Those applying to spruce vary very widely but are, in general, comparable with those of Quebec, although lower than those applied in New Brunswick.



Comparison of costs of pulpwood stumpage in three eastern provinces for the season 1944-45.

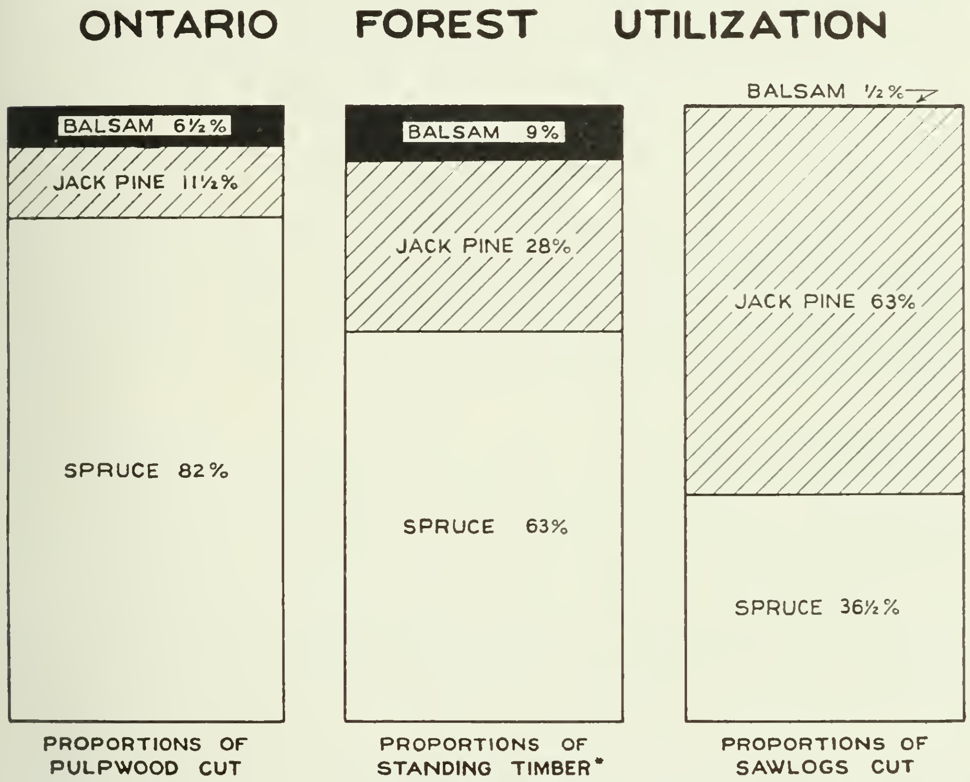
Quebec charges the same dues on balsam and jack pine as on spruce, as the accompanying diagram shows, and the utilization of the first two is much higher in proportion to spruce than in Ontario.

The pulp and paper industry in Ontario has not advanced nearly as far as elsewhere in Canada in the utilization of species other than spruce. I believe this has been due to the relatively low carrying charges on limits, as well as the lack of a down-payment at the time they are leased; to the relatively low stumpage rates on spruce, which is undoubtedly the most desirable species from the standpoint of the pulp and paper maker (except in kraft mills where jack pine is preferred); and to the piecework system in general use which renders higher returns to the individual in the black-spruce-swamp stands where trees are of uniform size and rarely very large.

Dominion Bureau of Statistics data indicate that in the manufacture of groundwood, the ratio of jack pine to other species used in Quebec is more than two-and-a-half times that in Ontario.

Ontario will probably always have higher freight charges on pulp and paper than her neighbour, Quebec, but with her more favourable terrain and soil, and distribution of railways, she should be able to overcome the handicap of the freight differential.

I am firmly convinced that, particularly in the western portion of the Province, though not confined entirely to that region, forest operators generally do not build sufficient control dams to utilize the potential log-carrying capacity of their streams. When dams are built, flooded areas are rarely cleared—except in isolated cases—but much boom timber is used to provide channels through the trees and debris which should have been removed. The cost and wasted effort of placing boom timber, with the added cost of driving logs under the circumstances, helps considerably in keeping Ontario's wood costs above those of Quebec. This is indicated by the annual quantities of boom timber cut, most of which is used for the purpose mentioned. For the past four years, the annual cut of boom timber has averaged 6,000,000 feet, equivalent to three to four hundred carloads of lumber.



*ESTIMATE BASED ON — SPRUCE 4"¢ UP, JACK PINE 6"¢ UP, AND BALSAM 6"¢ UP (DIAMETERS).

Diagram showing the proportions in which spruce, jack pine, and balsam occur in the forest compared with the proportions in which they are extracted for pulpwood and sawlogs.

During the period 1919-1929, Canada's total newsprint production increased by over 1,500,000 tons, with Ontario taking a very considerable portion of the increase. During the same period, the United States increased her newsprint production by only 40,000 tons. From 1926 onward, conversion of newsprint productive-capacity in the United States to other more profitable lines was actively pursued, while the cheaper and more highly competitive lines were left to the Canadian mills. This trend was particularly noticeable in the Lake States where, during the fourteen years ending 1935, the increase in the production of papers, other than newsprint, was 1,023,000 tons, while in the same period, newsprint production dropped by 137,000 tons.

The Lake States mills operate to a very considerable extent on Canadian wood, yet their products are "protected by tariff from low-cost producers, such as the Canadian and Scandinavian". The quotation is from a speech of Mr. A. R. Graustein, when President of the International Paper Company, giving the reason why United States mills had turned away from newsprint to other kinds of paper. In 1943, ten times more wood was imported into the Lake States than in 1919, compared with an increase of one-sixth in the consumption of their own home-grown wood.

Canadian fine-paper mills compete in Canada with paper made in the United States, possibly from wood exported from Canada. As evidence of this, I point to the fact that the first letterheads of this Commission, purchased on the open market in Toronto, were printed on United States bond paper. While I appreciate the complexity of tariff structures and know that they are matters for national, not provincial, negotiation or action, I believe that a joint study of the matter, with federal, provincial and industrial interests collaborating, might well prove of lasting benefit to the Canadian interests concerned.

I have found no instance of the use of sawmill slabs, trimmings and edgings in Ontario's pulp mills, though this is already the practice outside the Province. If sawmill slabs were collected and funnelled to pulp mills, the drain on limits would be eased to a considerable extent. I estimate the potential supply of pulpwood from this source at 65,000 cords of spruce and balsam, and upwards of 80,000 cords of jack pine. Not all of this can be economically delivered at the present time, but much of it could.

Some mills in Ontario have examined the possibilities of using poplar for pulpwood and its greater use for this purpose should be encouraged. Little development work has been done toward the utilization for pulpwood of hardwoods other than poplar. though the potential supplies of hardwood in Southern Ontario and the Algoma Region are tremendous.

Ontario mills are to be commended for pioneering in the development of by-products from sulphite liquor. They are leaders, amongst Canada's mills, in the installation of plants for the production of vanillin, plastics and industrial alcohol, and one plant also produces yeast.

In view of the cost and at times the uncertainty of coal supplies, it is remarkable that investigations have not been more actively and energetically pursued leading to the development of a fuel from waste liquor resulting from chemical pulps. This would be a fruitful field in which to seek economy because of central Canada's lack of coal and its dependence on the United States as its main source of fuel.

The almost complete divorce which exists between sawmills, on the one hand, and pulp and paper mills on the other, is costly and wasteful of both money and manpower. The final chapter of this report will suggest a remedy for this ill.

SAWMILLS

A completely different set of conditions from those applying to the pulp and paper industry affects timber markets and sales. In addition, the Canadian section of the lumber industry has never employed as many technically trained personnel, on either woods or sawmill operations, as the pulp and paper group.

The difference in the approach to woods and mill problems is probably because the sawmilling industry was active for nearly a century before the younger industry, and tradition has affected its actions to a much greater extent.

The lumber industry in Upper Canada commenced in a modest way in the first half of the last century, being then confined to the lower Ottawa Valley and a fringe along the front of Lakes Ontario and Erie. It expanded rapidly up the Ottawa and in the latter half of the century covered Southern Ontario and progressed up through the Parry Sound District, along the north shore of Lake Huron to Sault Ste. Marie. This rapid development was due in large part to the settlement and building up of the mid-western portion of the United States, with export from Eastern Ontario to the United Kingdom always a good sound backlog. Around the turn of the century, the vast Minnesota lumbering operations projected themselves across the border to the white pine and red pine forests west of the Great Lakes. From there they ate their way eastward toward the Great Lakes, on the lower stretches of which the larger units of the Canadian industry were even then closing for lack of timber.

Wherever the lumber industry has gone, the story has varied little. With the notable exception of a couple of the older firms in the Ottawa Valley who have continued in business for a century or more, few lumber organizations have ever lasted beyond a couple of generations. Methods then used were incredibly wasteful when viewed from today's standpoint and they generally brought devastation to the areas cut over, so that now only a handful remains of what were some of the most valuable pine forests on the continent.

Settlement invariably followed in the wake of lumber operations and the fires set by our ancesters in clearing land, much of which later experience indicates should never have been cleared, completed the ruin of the residual forests left after the white pine and red pine had been taken. The vast programme of reforestation and soil and stream rehabilitation, which is recommended in later chapters of this report, had its genesis in the operations of these pioneer lumbermen and settlers. To replace the forests then destroyed and to rehabilitate the soil is a long and costly process which must be undertaken by the grandchildren and great-grandchildren of those who benefited from the mistakes in the past. We must guard against handing on our remaining forests to our descendants in a similar condition.

There are a total of 1,147 sawmills of various sizes licensed in Ontario. This number varies from year to year and in addition there are some small mills which operate only a few days during the season and do not undergo the formality of obtaining a license.

The sawmill output in 1944 was 585,237,000 feet board measure, which is about one-third of the annual production in the early days of the century.

Mills have increased in number and decreased in size since the early days of the century, so that the average output per mill is very little more than one-quarter what it was then. At that, the average output per mill is about 20 per cent more than that of the remainder of Eastern Canada. (British Columbia conditions are not considered comparable.) Sawmill employees in Ontario produce about nine per cent less per man-day than the average for the remainder of the Eastern Provinces, but the product is worth 14 per cent more. The reason for lower production and higher value lies chiefly in the greater percentage of white pine and red pine in Ontario's cut.

This Province has not held its former place in the national picture. In 1908, Ontario produced 92 per cent as much lumber as all the other Canadian Provinces combined, excluding British Columbia. In 1944, the corresponding percentage was 31.4 per cent. If we are to have a balanced forest economy, this decline must be checked and the trend reversed.

A significant and healthy trend in sawmill production in Ontario has been the increased use of jack pine. Statistics for 1944 indicate 103,161,000 f.b.m. used. This was exceeded by only one species, white pine. I am convinced that the sawmill industry in Ontario, for several decades, will depend to an increasing extent on jack pine, with poplar usage also expanding to a degree not yet generally appreciated. White pine and red pine should again overtake and surpass the other species in utility in from forty to fifty years, if given the chance they deserve, including protection from cutting before they have reached economic maturity, a condition now seriously violated. For the present, we can only expect a downward curve of white pine and red pine production as the few remaining stands continue to be overcut in the effort to supply the demand for these very valuable species.

Jack pine has not received the favourable advertising its qualities justify. In strength and quality it is little, if at all, inferior to spruce, and in appearance I believe it surpasses that species. There appears to be a tendency, however, on the part of industry to be apologetic for its use, a tendency which must be eradicated. Poplar, too, is eminently suitable for a great many purposes for which the conifer species are now demanded. Operators in this Province, who are failing to utilize and sell these two species to their maximum possible capacity, are assisting in preparing an early grave for the unnecessary interment of their industry.

Spruce, birch and maple production has remained fairly constant during the past quarter century or more. They form the other major species cut in addition to white pine, red pine and jack pine. The sawing of poplar has not yet become a major element in our Provincial lumber production. A comparison of the average cut for five-year periods in three representative periods is worthy of note.

	Average for Five Years 1908-1912	Average for Five Years 1932-1936 (Depression)	Average for Five Years 1938-1942
All conifers.......	1,334,069 M f.b.m.	251,306 M f.b.m.	457,382 M f.b.m.
All hardwoods....	152,084 "	52,390 "	93,714 "
	1,486,153 "	303,696 "	551,096 "

IMPORTS OF LUMBER

During the period 1928-1938, a bi-annual survey made gave evidence that Ontario was even then bringing in 150,000 M f.b.m. of lumber per annum more than was being shipped out. The survey was discontinued in 1938, but fragmentary data available indicate that imports have not lessened and that, if more abundant supplies from outside were available, the quantity would be considerably greater.

Because of Ontario's large population and high degree of industrial development, it consumes a great deal of lumber, but it does not produce nearly as much as it might or should. It is illogical that the Province of Ontario, possessing nearly two-fifths of all the accessible saw-timber east of the Rocky Mountains, does not meet its own requirements of lumber and must depend upon its neighbours for raw material for its industries. In the last year for which accurate statistics are available, only Prince Edward Island, Manitoba and Saskatchewan were further from meeting their own requirements of lumber than Ontario, and these three provinces combined have scarcely more than one-tenth of the saw-timber resources of Ontario. The fact that a considerable volume of lumber is shipped out of Ontario should not be permitted to cloud the issue. The cardinal fact is that the volume of lumber brought into the Province greatly exceeds the quantity shipped out. We shall probably continue to export a considerable volume of lumber, and we must of necessity import some species not native to this Province. But the net balance must be improved if a healthy condition is to be achieved. The present shortage of lumber in this Province is evidence of that need. Other provinces are not anxious to make up our lumber deficiency when other more lucrative markets are open, and we are unable to show any valid reason why they should. We have the demand for lumber, we have the necessary raw material to meet that demand, even more than meet it, but a basic weakness exists in the industry which converts the raw material into the product needed. It is felt that a re-orientation of Government policy could do much to maintain and develop the lumber industry in line with the needs of the people of this Province. Ontario's performance has no parallel in any other province, though its opportunities are as great. The decline in lumber production cannot be explained by suggesting that what we have lost in that industry we have more than made up in an expanded pulp and paper industry. This argument fails to convince because in other parts of the country, proportionately no more richly endowed with forests, the pulp and paper industry has expanded even faster than in Ontario, while at the same time lumber production has been maintained or increased, without apparently any greater damage to their forests. The reason is that in Ontario we lack a balanced policy with respect to our forest industries.

It is submitted that too many of Ontario's sawlogs are located on pulpwood concessions, both domestic and export. If the lumber industry is to continue to exist, these logs must be diverted to it, instead of being converted to pulp and paper for which smaller logs serve equally well.

It is true that many sawmill operators did not provide themselves with limits while they were available and are largely to blame for the situation in which they now find themselves. It is the citizens of Ontario, however, who will be the chief sufferers if we permit these improvident lumbermen to be eliminated by timber starvation. It is extremely doubtful if the forests of Quebec and New Brunswick, in addition to supplying their traditional markets in Great Britain and the Eastern Seaboard of the United States, can make up for the production of the Ontario mills, which will run out of local lumber during the next twenty-five years. In addition the threat of increased freight rates is even now upon us, and such increases would make the price of lumber supplied from outside the Province less attractive than at present.

Lumber for housing should be made as cheap and abundant as possible. Lumber also forms one of the largest single items of expense in the operation of our vast mining industry, which now uses about 70,000 M feet board measure

Logs intended for the manufacture of lumber. The diameters of the logs may be estimated by comparison with the hats in the foreground. Some of the smaller logs will yield the Province only two or three cents in stumpage and should have been scaled in cubic measure and used for making pulp.

Spruce up to 29 inches in diameter cut for pulpwood, but more suitable for sawlogs. The hat indicates the size of the logs. (Domestic company operation.)

per annum. These are but two of the many urgent needs for lumber stressed at public hearings of the Commission.

I therefore argue that we must maintain the lumber industry of Ontario, even though it means a changed viewpoint on the part of pulpwood operators. This should not be achieved by closing a majority of existing sawmills and opening up new ones which might be appendages of the pulp and paper industry. I believe that, in general, the continuity of present mills and their dependent communities should be assured and that Provincial interests will best be served by so doing, rather than by the development of new mills. Rescue of the lumber industry from its precarious position implies an obligation on its part to eliminate waste, both in woods and mills and to co-operate with the pulp and paper industry in providing pulpwood as a by-product.

A good reason for the continuance of existing units in the lumber trade is the complexity of the lumber market. There are several markets and uses into which the products of any log must be channelled. Any sudden shift in manufacturing and marketing processes might have far-reaching and detrimental results in the rather delicately balanced existing trade methods.

The wholesale trade co-ordinates the product of the hundreds of mills and fits it for market. It furnishes the real and, for many firms, the only sales service available to locate home markets and markets in the United States, Great Britain or elsewhere. Under present conditions this might not appear important, but under normal trade conditions it is most necessary.

The retail trade maintains establishments for further processing of lumber in all the major centres of population and performs a very vital service to the public. They funnel into the hands of the public the portion of sawmill output which the public can absorb. Acting in conjunction with manufacturers of secondary products, as well as with the export trade, they are a powerful influence in providing full utilization of that portion of the log which reaches the market.

Few people outside the trade realize that the effects of wartime controls are likely to persist even after the controls have been removed. Nobody should deny the necessity for drastic action in wartime, but I believe that the application of such measures implies an obligation to lend a hand, if necessary, toward remedying the trade dislocations so engendered. To illustrate my point, I quote the following example. In normal times, British Columbia fir was shipped to Eastern Canada for flooring, but wartime needs properly diverted it elsewhere. Eastern Canada's hardwood flooring producers had developed a creditable export trade which proved a godsend in depression years but, later, wartime output was necessarily channelled into the domestic field. With a return of normal trading conditions, British Columbia flooring will probably reappear as a competitor, but the export field may not easily be regained.

The lack of a sufficiently wide price range for the different grades and species of lumber has been the occasion of widespread complaint by operators across the Province. Although the subject was not stressed at public hearings, I am inclined to believe there is some justification for the contention that many dealers, with the knowledge of customers, invoiced their lumber as being several grades above the actual quality, in order to meet black market competition and achieve profits under the existing piecework rates. Certainly some smaller mills visited gave little thought to grading. The result of years of effort to establish proper grading practices has largely been undone and, as a result, Canadian lumber will suffer in the export market.

Restrictions on exportation, the fixing of price ceilings, an income tax which, beyond a certain level of income approached confiscation, and other restrictive measures have all combined to discourage lumber production to a very grave extent, especially by the most responsible element in the trade. A spirit of patriotism can make the unworkable work in wartime, but such is not so today. This Commission has been told of instances of lumbermen actually curtailing their operations in the face of the present urgent demand for lumber. The reason given is a simple one. A large cut involves substantially more risk because of the greater inventory and greater capital outlay entailed, but under present conditions it offers the prospect of but little more net gain than does a small one, even if market conditions and prices should remain stable. Who, in these circumstances, would not follow the prudent course?

I am not an advocate of the immediate abandonment of all controls, indeed the matter of federal controls does not fall within the scope of this inquiry; but I believe I should draw attention to the wide discrepancy which exists between the apparent intent of certain federal regulations and the results they are achieving. By not doing so I should fail to show the provincial picture in its proper perspective. I believe that until this gap is closed and until the production of lumber on a large scale is restored as a reasonable risk, the best efforts of the Provincial Government to stimulate the manufacture of much-needed lumber can produce only very limited results for the time being. The stimulus should be given, however, and given without delay, as a necessary step in a long-term policy.

One of the most likely methods of increasing the profits of sawmills generally and at the same time lowering the cost of lumber to the public, lies in use being made of those parts of the logs now wasted. As an example of the need of closer utilization, an analysis of the Dominion Bureau of Statistics sawmill data for 1943 is presented below. Volumes have all been converted to cubic feet of solid wood.

RAW MATERIALS

	Volume		Value	
	Cubic feet	Per cent of total	Per cubic foot	Total
Logs and bolts used	134,000,000	100	$0.10	$13,526,633

PRODUCTS

	Volume		Value	
	Cubic feet	Per cent of total	Per cubic foot	Total
Lumber	45,500,000	34	$0.47	$21,261,613
Ties, shingles, pulpwood, etc.	7,500,000	5½	0.20	1,516,336
Secondary products and waste	81,000,000	60½	0.05	3,954,529
	134,000,000	100	0.20	26,732,478

As the cost of the raw material at the mill was roughly 10 cents per cubic foot, it is readily seen that three-fifths of the raw material handled was disposed of at half its cost. No clearer evidence could be found of the necessity for research aimed at the reduction of sawmill waste. It is possible that some operators may argue that the value of all secondary products and waste has not been reported, but another million dollars added to the values shown above would have no significant bearing on the conclusion reached.

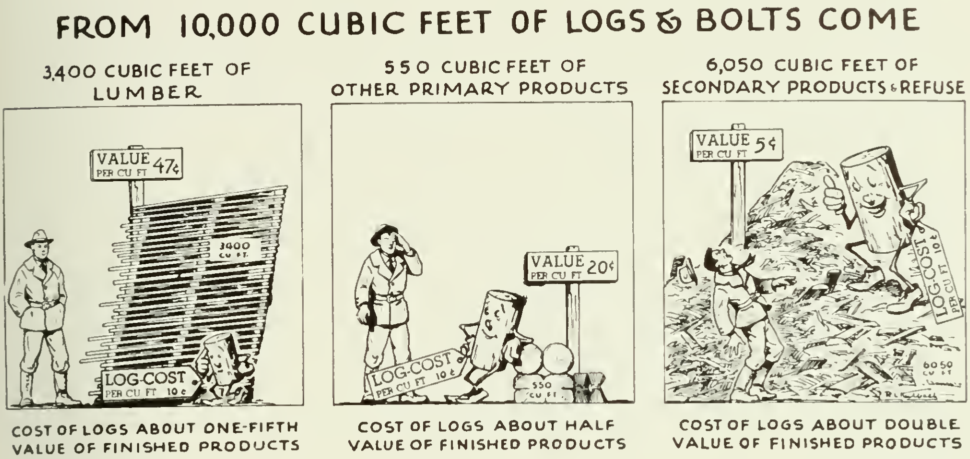

FROM 10,000 CUBIC FEET OF LOGS & BOLTS COME
3,400 CUBIC FEET OF LUMBER
550 CUBIC FEET OF OTHER PRIMARY PRODUCTS
6,050 CUBIC FEET OF SECONDARY PRODUCTS & REFUSE
VALUE PER CU FT 47¢
3400 CU FT
LOG-COST PER CU FT 10¢
VALUE PER CU FT 20¢
LOG-COST PER CU FT 10¢
550 CU FT
VALUE PER CU FT 5¢
LOG-COST PER CU FT 10¢
6050 CU FT
COST OF LOGS ABOUT ONE-FIFTH VALUE OF FINISHED PRODUCTS
COST OF LOGS ABOUT HALF VALUE OF FINISHED PRODUCTS
COST OF LOGS ABOUT DOUBLE VALUE OF FINISHED PRODUCTS

Chart indicating the unnecessarily high proportion of refuse and low-value products in the sawmill industry together with the comparative costs and values of the several classes of products.

During the past season I have measured the length of many logs on rollways and I have rarely found any log shorter than the measurement of its length class, plus the tolerance allowed. On the other hand, a large percentage of the logs measured were overlength, i.e. a nominal 16-foot log with an overlength tolerance of six inches would often measure 17 feet or more. In the sawmill system of Eastern Canada, this would be trimmed to 16 feet, a loss of six per cent on every board sawn from the log. This overlength tolerance should be closely watched by scalers and all logs exceeding it should be tallied in the next higher length-class.

Large improvements in the yield from sawmill operations are attainable by the operator who will study details of market needs and cut more closely to the sizes, specifications and grades to meet those needs. Stress has always been placed on quantity production of lumber in standard widths, lengths and thicknesses. There are a few operators in the Province who have discarded the traditional methods of operation and are receiving big benefits from studying the needs of special customers and integrating their operations with those needs. The end-product of any of the sawmill group who are similarly clear-sighed may equal or surpass the returns per cubic unit now made on all but the highest grades of pulp.

It is not at all unusual to see the slabs of a mill left to disintegrate or to be carted off as firewood, in spite of the fact that another mill is set up in the same area to produce box shooks, basket bottoms, etc., from the same type of material. A large box factory, surrounded by sawmills, cuts up into little pieces and utilizes top grade white pine and red pine, while the slabs of similar grades from the other mills are shipped out as firewood or other low-income products. Poplar, balsam and jack pine, up to the present considered inferior species, could be made to supplant higher-priced species for many uses, at lower costs and higher returns to the producer than the species used. The co-operative collection and disposal of the low-grade material and waste of groups of mills offer a useful subject for study. A vast field for co-operation and integration in such matters remains virtually uncultivated.

I believe also that the day is upon us when sawmills should discard the practice of edging boards to even inches only, and trimming only to even feet of length. At what better time than in the present sellers' market could the trade get rid of this rather unnecessary waste which may range from 10 per cent to 20 per cent or more of the measurement of the board?

Before leaving this topic of industrial waste, however, I should perhaps say a word about waste in the pulp and paper industry, lest I leave the impression that only the lumber industry is guilty of incomplete utilization. The pulp and paper industry annually wastes thousands of cords of wood in the form of short ends of logs, slivers or unnecessary sawdust, all of which are used only as fuel to produce steam. Hundreds of tons of various substances are ejected into the sewers by chemical-pulp mills daily in forms which are capable of being converted into useful products such as sugar, yeast, alcohol, lime, acetic acid, etc., to say nothing of the products from lignin, a substance which forms a substantial part of wood and which is not generally utilized.

COMPARISON OF FOREST INDUSTRIES

The remarkable growth in the pulp and paper industry of Ontario and the simultaneous and almost equally remarkable decline in the lumber industry are depicted in the diagram opposite. Although, for convenience, production of lumber, pulp and paper is shown for only four years out of the past forty, the diagram is a fair representation of the long-term trends.

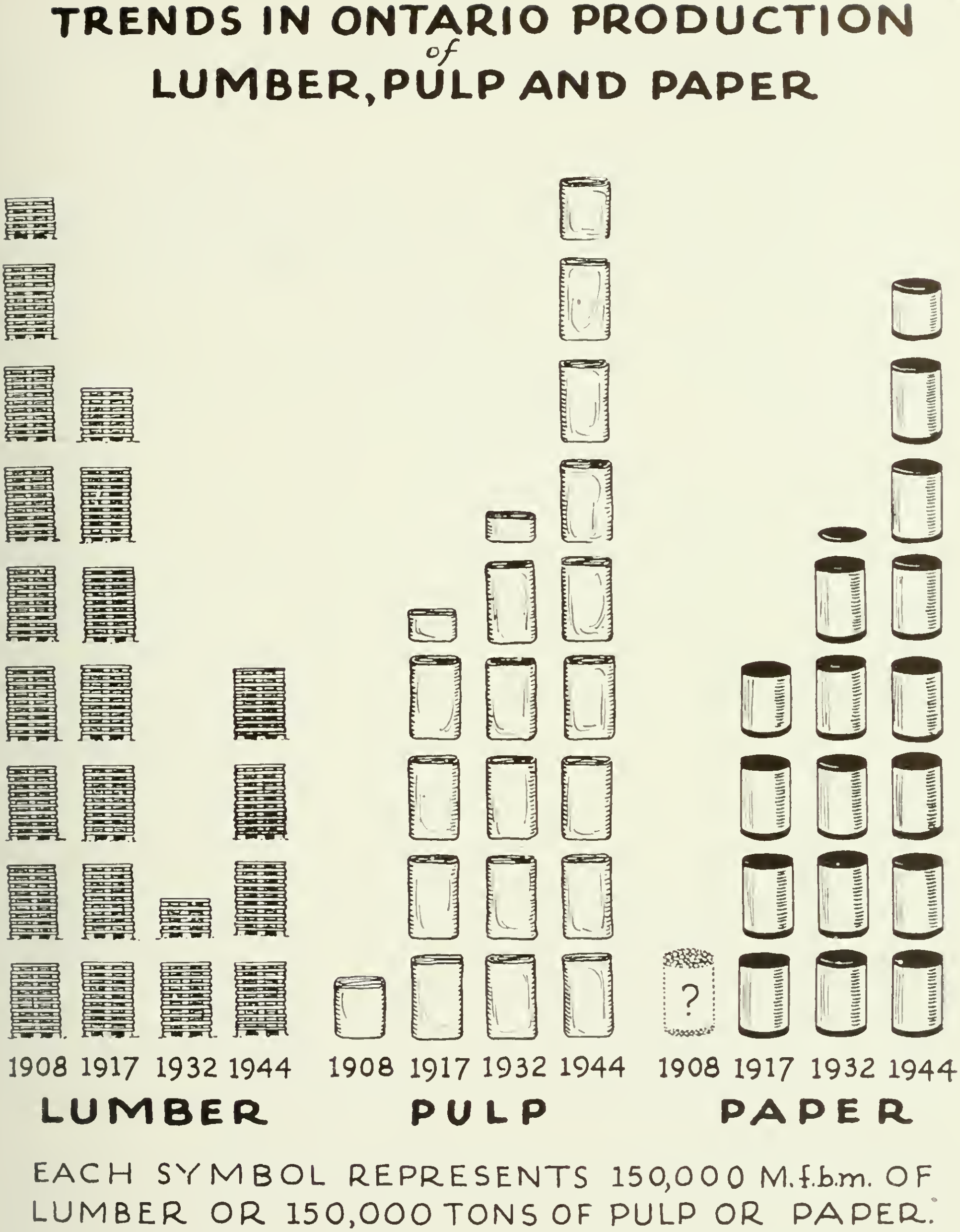
There has been a tendency to look upon the value of the end-product of the pulp and paper industry and that of the lumber industry as a reasonable comparison of their economic values to the Province. I am convinced that such a comparison misses many important features which radically affect the situation and which must not be neglected.

Analyzing the Dominion Bureau statistics for 1943 and converting wood volumes to cubic feet in all cases, the following figures emerge:

A cubic foot of wood used by the pulp and paper industry results in products worth 63 cents.

If converted to lumber, the figure is 20 cents, and if utilized by the wood-using industries (other than pulp and paper), 49 cents.

In practically all cases lumbermen pay higher ground rents and, in many cases, higher stumpage rates per cubic foot of wood of all species than is paid by the pulp and paper industries. (See curves on page 163). It is true that this fact has been beclouded for years by the Doyle rule, but it is a fact nonetheless. Some adjustment in this matter is overdue if all groups are to receive impartial treatment.



Trends in production of lumber, pulp and paper in Ontario since 1908.

In the same year, the wages and salaries paid per cubic foot of wood used by the various industries were as follows:

Pulp and paper	13 cents
Lumber	05 "
Wood-using industries	16 "

For each dollar received for the products, the industries paid out in wages:

Pulp and paper	20½ cents
Sawmills	26 "
Wood-using industries	32½ "

This latter tabulation modifies to some extent the idea that the end-product is all important. It may not appeal to those who believe that a dollar gained through the action of other dollars is more important than a dollar which reaches the pocket of the workman involved.

Pulp and paper mills tend to concentrate in areas where labour and power are available, but the personnel employed by and dependent upon the lumber industry is widely scattered in hundreds of small communities across the Province (see Map No. 11). This I believe to be beneficial as it is in direct opposition to so many other influences which tend to clog our towns and cities, leaving the hinterland without the supply centres necessary for their healthy development.

Lumber is now sadly needed in the repair and building of homes, for repairs to and the replacement of farm buildings, for railway ties, telephone and hydro poles, furniture, etc. **I therefore recommend that government policy be inclined in favour of the lumber industry, rather than against it, as would appear from stumpage rates, ground rents and limit allocations of the past decade.**

CHAPTER V

Crown Lands

ORIGIN OF CROWN LANDS SYSTEM

As indicated in Chapter I of this report, the establishment of Crown lands in Ontario had its origin in the needs of the Royal Navy, and during the early days of the Colony, all timber suitable for such needs was reserved for the Crown.

Lands necessary for agriculture, settlement, industry and recreation were alienated from the Crown, from time to time, as needs arose. The settler seeking land could obtain it in areas designated for settlement and after fulfilling certain obligations, such as the clearing of lands, the erection of buildings, etc., he could obtain title to his land by means of Letters Patent.

Until recent times, the Crown retained the rights to red pine and white pine on lands so patented, but legislation passed at the 1946 session of the Legislature allows the holder of lands with such reservations to obtain rights to the timber; free if he lives on the lot in question or within ten miles of it, and on very advantageous terms if it is situated more than ten miles from his domicile.

RIGHTS TO CUT TIMBER

Rights to cut timber on Crown lands fall under four headings:

(1) Licenses
(2) Agreements
(3) Permissions
(4) Permits

Forests already under license or agreement are indicated on Map No. 8. The number of unleased areas interspersed among the leased areas will be noticed on this map.

Licenses

Licenses are granted as the result of the sale of timber by auction. They are renewable yearly, provided the holder has complied with the laws and regulations relating to such operations.

Licenses granted prior to 1892 generally permitted the cutting of all species of timber on the area involved and stumpage rates applying to these licenses remain essentially the same as at the time the licenses were granted. The holders of such licenses have enjoyed very favourable stumpage rates over a long period of years. (In 1898 the right to cut species other than red pine and white pine was cancelled on limits within the boundaries of Algonquin Park, even though these licenses had been granted prior to 1892.)

Licenses granted since 1892 include only the specific species mentioned in the license. In addition to the "Crown Dues", as the earlier stumpage rates were called, they normally provide for a "Bonus", and sometimes include a "Bid" above the bonus.

The practice of selling timber by auction has not always been to the best advantage of the individual or the Government. A very high bid places the license holder in a precarious position in times of low prices. His most likely course is to stop cutting the high-priced stumpage during depression times, causing unemployment and distress just at the time when employment is most needed.

Bidding for timber under licenses and permits has created a wide range of stumpage rates, as over optimism during boom periods or other causes (including a dog-in-the-manger attitude and ordinary spite) may motivate a bidder to offer rates which are not economically sound in normal times. It has been claimed that some companies wishing to dominate an area have made bids far above the possibility of normal economic utilization on species they did not require. The result was that, in some cases, the timber in question was denied to other operators and left a prey to fire and insects, with the Province losing employment and stumpage revenue. As an example of wide ranges, rates in this Province for red pine and white pine vary from $2.50 per thousand feet board measure, on old licenses in the Ottawa Valley, to $25.75 per thousand board feet on small areas in the Port Arthur District. Little, if any, of the material subject to the higher stumpage rates will be cut except during boom times.

A chart indicating the average rates in the various districts is shown on the next page and it will be noted that there are wide ranges for most of the species, with white pine and red pine showing the greatest variations.

Ground rent at $5.00 per square mile and fire protection charges at $6.40 per square mile are normally charged each year on the areas under license.

Agreements

This term applies to instruments granting Crown lands under contracts negotiated between the Government and individuals or corporations and large areas are usually involved, although there are areas as small as 30 square miles included in the group. Agreements cover a wide range of conditions, sometimes requiring the building of a new mill or the employment of specified numbers of men. Some agreements carry export rights for all or a portion of the wood on the area and some do not include rights to cut all species.

Fire protection charges are usually levied at $6.40 per square mile on the full area, or at least on a substantial portion, which is deemed to be the full area for the purpose of the contract. Ground rent on areas covered by agreements is levied at widely varying rates. It may be said, however, that the basic formula for fixing rates is that pulpwood consumed in Canada incurs no charge for ground rent, while pulpwood exported incurs a charge equivalent to $5.00 per square mile on that proportion of the limit area which the amount of wood exported bears to the total amount taken from the limit in any given year. There are many exceptions to this general rule, however, the most important one being the charging of ground rent at approximately 50 cents per square mile per year to those Canadian manufacturers of pulp and paper who have the right to cut all classes of timber on their limits.

In general, the contracts or agreements so written are a tribute to the bargaining capacity of the interests who have obtained the cutting rights. Whether

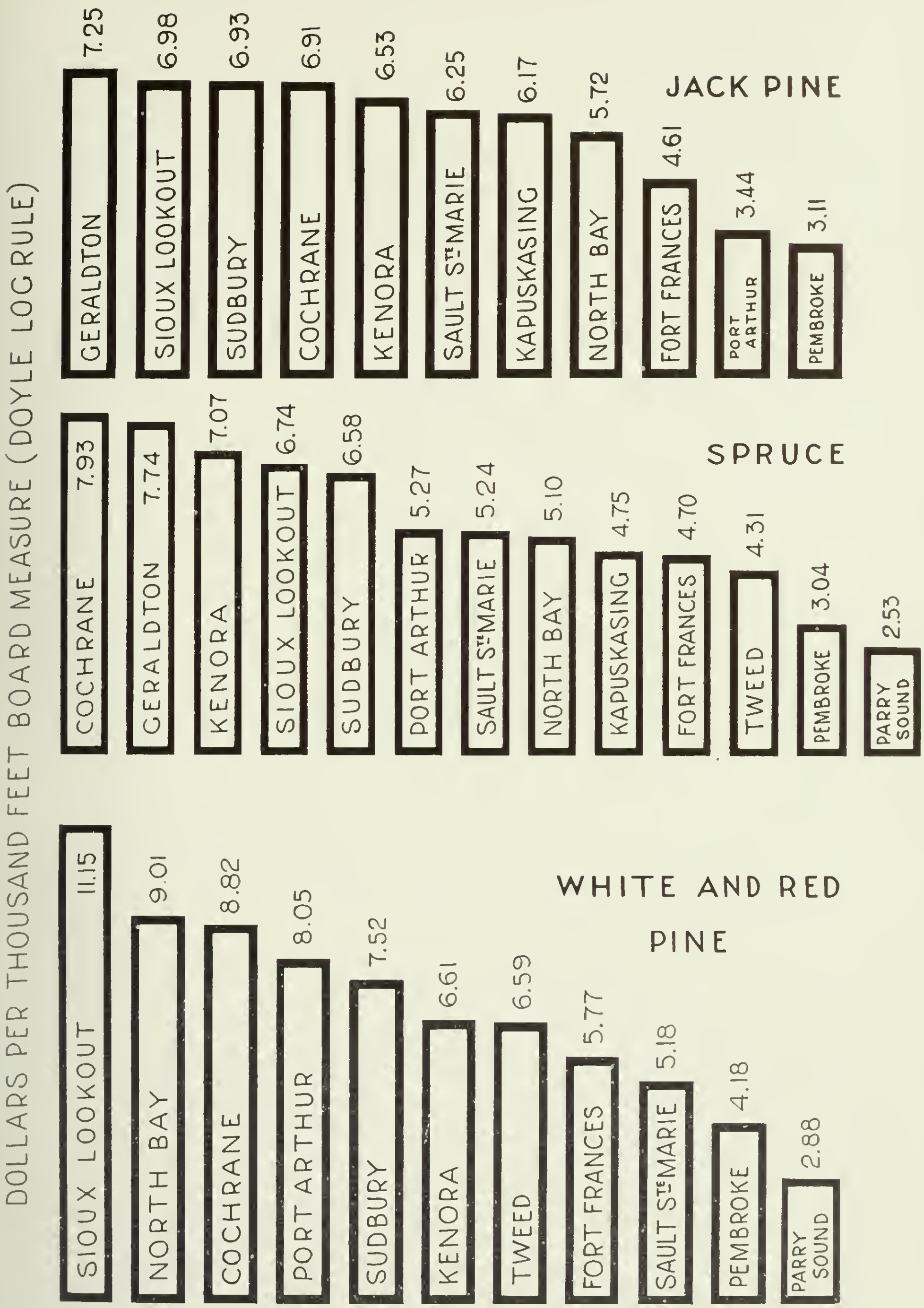


Diagram showing average crown revenue per thousand board feet (Doyle log-rule) for sawlogs by Forest Districts in the season 1945-46. Note the many marked inconsistencies.

or not they have proven or, in the final analysis, are likely to prove sound bargains on the part of the Province, will be discussed in the chapter dealing with Timber Management.

Permissions

This is a term applied to rights to cut timber from Crown lands in special cases where an agreement or license is not in effect. Permissions may be granted because negotiations leading up to a contract are under way but have not been completed. In some instances, substantial quantities of pulpwood are involved and the wood cut may be exported.

Permits

Permits are issued by District Offices for small quantities of timber where the stumpage value does not exceed $500, and may be issued by the District Office without reference to Head Office. Ground rents and fire protection, when applicable, are at the standard rates, $5.00 and $6.40 per square mile, respectively.

Areas of Crown lands operated under each of the above headings are as follows:

(1) Licenses	12,318	square miles
(2) Agreements	53,754	" "
(3) Permissions	4,012*	" "

The total area operated under the permit system is not great in comparison with the areas operated under other forms of tenure, because it is usually only one season's cut which is involved. Very frequently a permit does not define any precise area, but merely grants authority to remove a specified quantity of timber from a given locality. In addition to the areas specifically alienated under the above classifications, the Crown holds in reserve a total area of about 11,000 square miles. These lands are held in favour of certain pulp and paper companies which may, within a stipulated period, elect to add to their timber holdings. Meanwhile, these areas are withdrawn from possible use by others and return no revenue to the Crown, although the Province continues to pay the cost of protecting them from fire.

RELEASE OF LIMIT AREAS

In Ontario, the practice of cutting over an area held under license and turning the cut-over area back to the Crown has been widely practiced, particularly by the sawmilling group outside the Ottawa Valley. Many of the smaller sawmills across the Province are operating in the residual stands left by the larger units of the industry. The original holders exploited the choice stands on their licensed areas, but left the poorer stands. Then, without making any substantial payment, they could and did obtain other areas where a bigger profit could be realized by further high-grading of choice stands. This has occurred in all parts of the Province where lumbering operations have been carried out, with the exception mentioned above. Thousands of square miles of licensed area has been cut over and turned back to the Province.

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*The total area operated under "permission" does not include those areas on which one operator has been given a permission to cut certain classes of timber on areas already covered by agreements with other operators.

In other timber-producing provinces of Eastern Canada, notably New Brunswick and Quebec, an individual or corporation cannot obtain limits without a substantial down-payment, and this practice would probably have been of great benefit if it had been adopted in Ontario.

For almost a quarter of a century, sales of timber in Quebec have required a down-payment never less than $400.00 per square mile, with an annual ground rent of $8.00 per square mile (reduced only for a few years in the early 1930's when ground rent was $3.00 or $5.00), in addition to the actual cost of fire protection (including half the cost of fire fighting). This latter item usually amounts to $8.00 to $12.00 per square mile per annum.

In Quebec, all species are included in the license, which is for one year only.

In New Brunswick, the down-payment to obtain limits has varied between $20.00 and $75.00 or more per square mile with ground rent at $8.00 per square mile, a bonus of $2.00 per square mile, and fire protection pegged at $3.20 per square mile (½ cent per acre). Licenses are normally for 30 years but a few large areas are under license for a 50-year period, and a large number of small licenses are for a 10-year period.

COMPARISON OF GOVERNMENT CHARGES FOR TIMBER AND TIMBERLANDS
(for operating season 1945-46)

	Ontario	Quebec	New Brunswick
Cost of acquisition of cutting rights per square mile. .	Nil	$400.00 and up	$20.00 and up
Ground rent per square mile average . . .	$1.50[1]	$8.00	$10.00 (including 2.00 "bonus")
range	Nil—$5.00	(Single rate)	(Single rate)
Fire protection per square mile.	$6.40	$11.50 (approx.)[1] (based on actual costs)	$3.20

STUMPAGE[2]
(Normal rates for sound "green" timber)

Species	Sawlogs per M. f.b.m. log scale[2]			Pulpwood per cord of unpeeled wood		
	Ontario[3]	Quebec[7]	New Brunswick[5]	Ontario[3]	Que.[4],[7]	New Brunswick[5]
White pine—average. . . .	$4.20	$1.56	$5.45			
range.	2.50-25.75	. . .	. . .		. .	
Spruce —average. . . .	2.45	1.44	4.20	1.61	$1.35	$1.84
range.	2.00-13.50	.		1.40-4.25	. .	. .
Balsam fir —average. . . .	2.05	1.44	4.30	1.02	1.35	1.84
range.	2.00- 9.00[6]	. . . .	.	.70-3.00	. . . .	. . .
Jack pine —average. . . .	2.05	1.44	3.90	.48	1.35	1.35
range.	2.50-13.25	. . .	. . .	.40-2.75	. . .	. . .
Poplar —average. . . .	1.60	1.20	2.60	.52	.85	1.20
range.	1.55-10.00	. . . .	. .	.40-2.20	. . . .	. .

[1] Figure for 1944-45 (latest available).

[2] The comparison is based on the "International ¼ inch" log rule applied to the average size of logs—each species separately—cut in Ontario. The stumpage rates are those prevailing in each of the provinces named translated into terms of the "International" log rule. The *ranges* of rates shown for Ontario are based on the "Doyle" rule.

[3] Figures for Ontario include "dues", "bonus", and "bid."

[4] Figures for Quebec include special levy of 10 cents per cord.

[5] The New Brunswick rates on all the species listed, except poplar, were increased considerably in the season 1946-47.

[6] Approximate.

[7] In Quebec, stumpage rates for sawlogs were increased (in effect) in 1946, and the rates for pulpwood were raised in 1947.

LANDS FOR AGRICULTURE, TOWNSITES, SUMMER RESORTS, ETC.

The Department of Lands and Forest handles all transactions concerning the granting or leasing of Crown lands for the purposes of agriculture, townsites, summer resorts, etc. There has been a noticeable improvement in the control of these transactions since 1941, when the late H. W. Crosby was placed in charge of the Division dealing with lands. To him must go a major share of the credit for eliminating, to a very considerable extent, the conditions which over the years have laid waste hundreds of thousands, if not millions, of acres of forest lands under the guise of assistance to settlement and to agriculture. In reality, the timber was mined from most of these lots, sold to domestic mills or exported, and the denuded lots allowed to revert to the Crown. Comparatively few of the lots in question were suitable for supporting agriculture because of the nature of the soil and climate, and the distance from markets.

The subject of classification of lands to prevent such wastage in the future is covered in Chapter XVIII.

REPRODUCTION

Up to the present, cutting practices on Crown lands in Ontario, as elsewhere in Eastern Canada, have been governed by considerations of current operating costs, rather than by the needs of a future crop of timber from the same area. Good reproduction, when it has occurred, has always created satisfaction, but it has been the child of chance rather than of design.

Pine in the Ottawa Valley and a majority, though not all, of the black-spruce-swamp types in the Province, give promise of future stands commensurate in quality and quantity to those cut. Other cut-over areas, on the average, are reproducing to inferior species or are barren or only partially stocked.

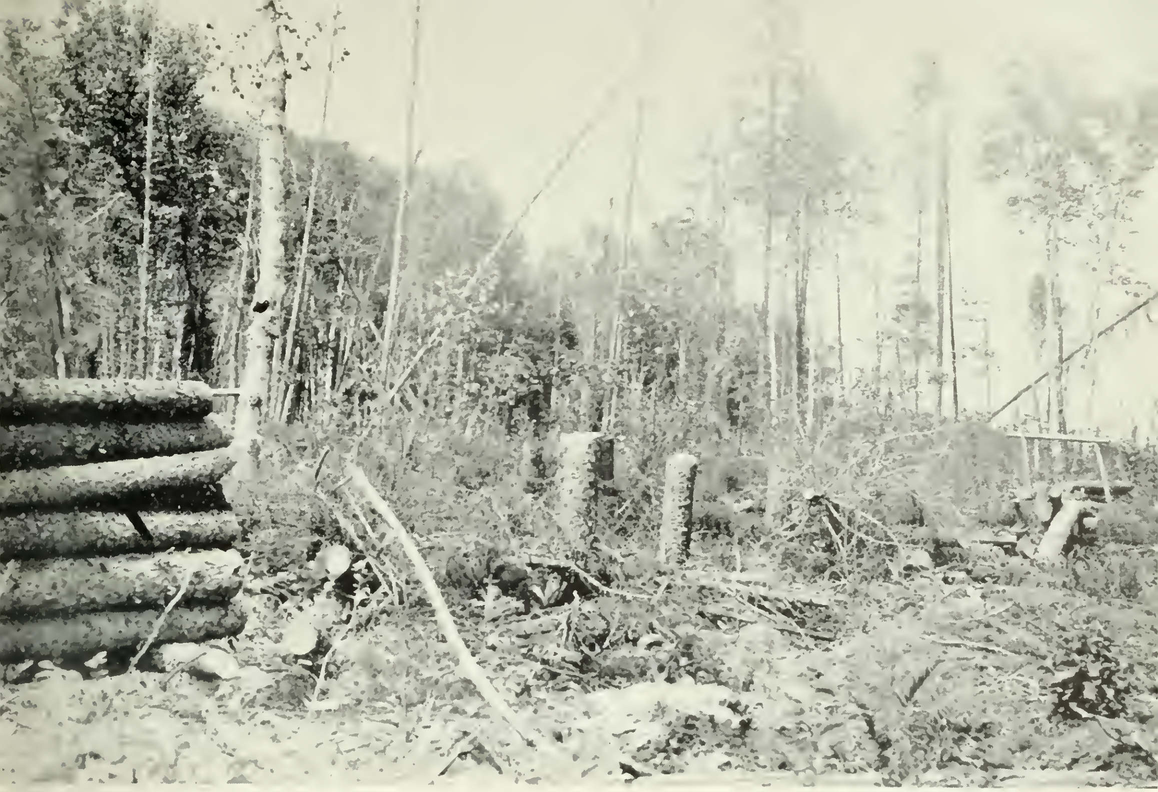
If Ontario is to remain one of Canada's major timber-producing provinces, this trend must be checked and practices developed and enforced which will guarantee a future crop preferably better than, but at least as good as, the one harvested, if such is economically feasible. Much research is needed in the methods of cutting the different species on different sites, before such methods assuring adequate reproduction can be recommended with a reasonable degree of certainty. Such research should not be delayed.

RECOMMENDATIONS ON CUTTING PRACTICES

I recommend the following cutting methods which may be enforced now and which will save much timber presently wasted:

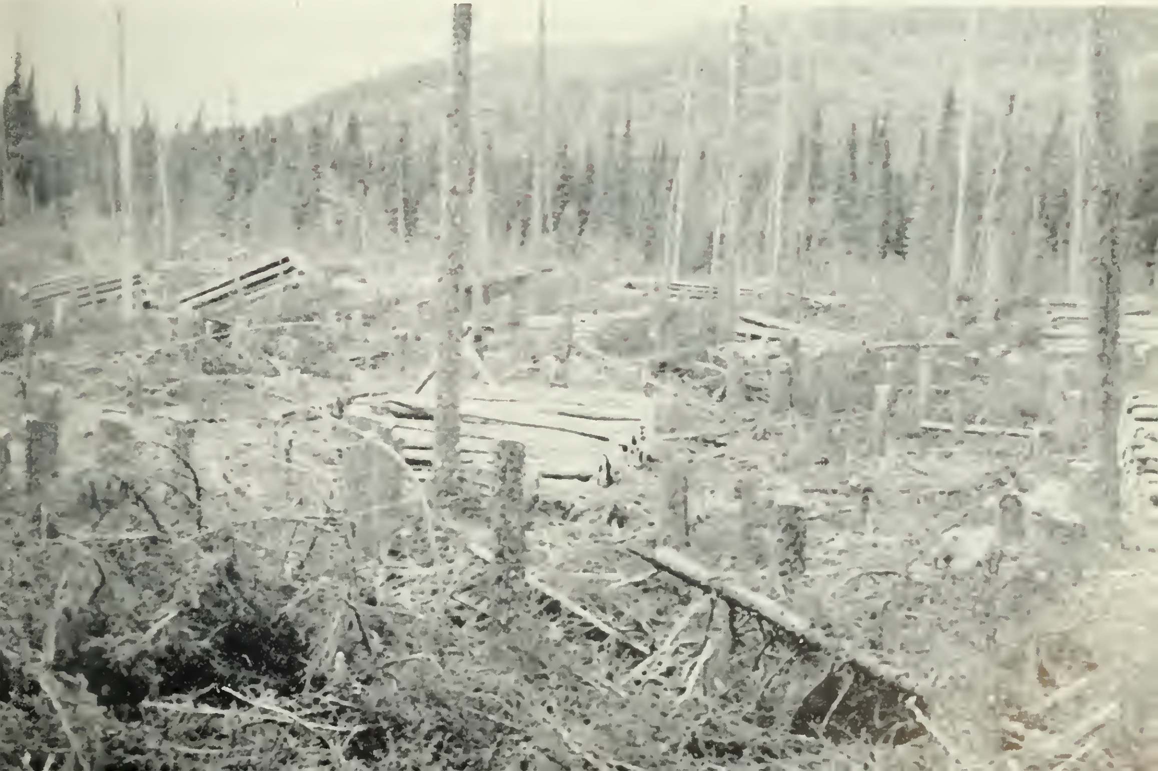
(1) No stumps over 12 inches in height to be tolerated. There is no adequate explanation to be given for high stumps. A stiff penalty (five cents per inch of excess height per foot of diameter or fraction thereof) shared by the operator and the cutter, would cure this wastage overnight.

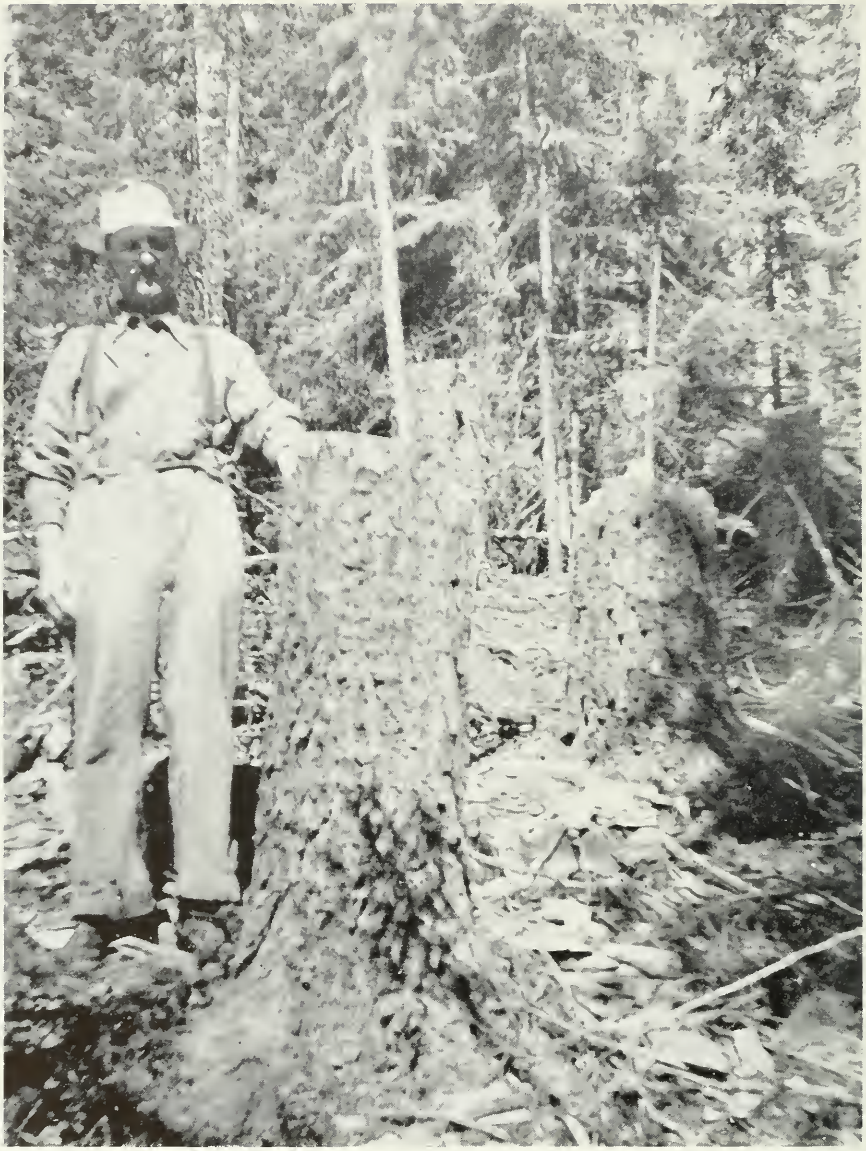
(2) Large tops must not be permitted. A regulation requiring that on operations for sawlogs all trees be utilized to a top diameter of seven inches in conifers and nine inches in hardwoods, with limbs lopped to a diameter of four inches, would eliminate this widespread waste. On other forest operations, tops should not exceed four inches in diameter, with limbs lopped to three inches.



Waste in pulpwood cutting. The most valuable parts of trees left in high stumps. (Domestic company operation.)

Waste in pulpwood cutting. The most valuable parts of trees left in high stumps. (Pulpwood-exporting company operation.)

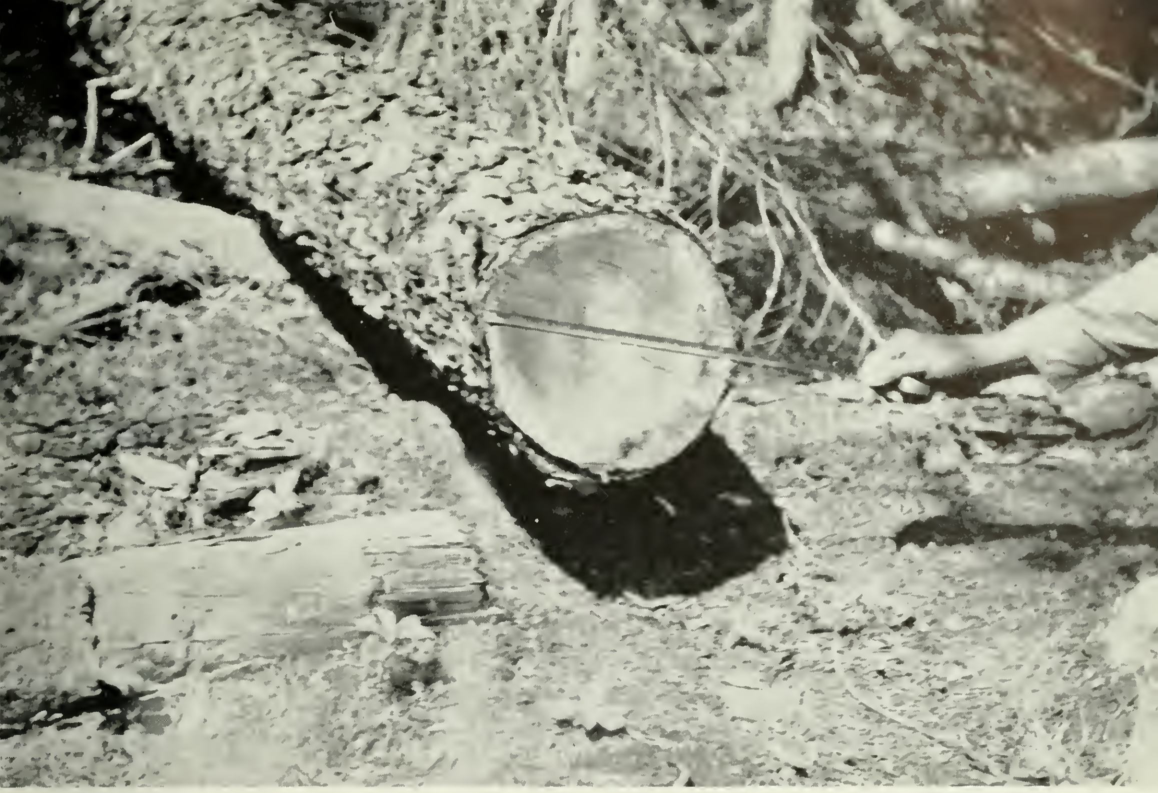




Waste in cutting sawlogs. The four stumps in this illustration are sound and measure 36 to 42 inches in height.

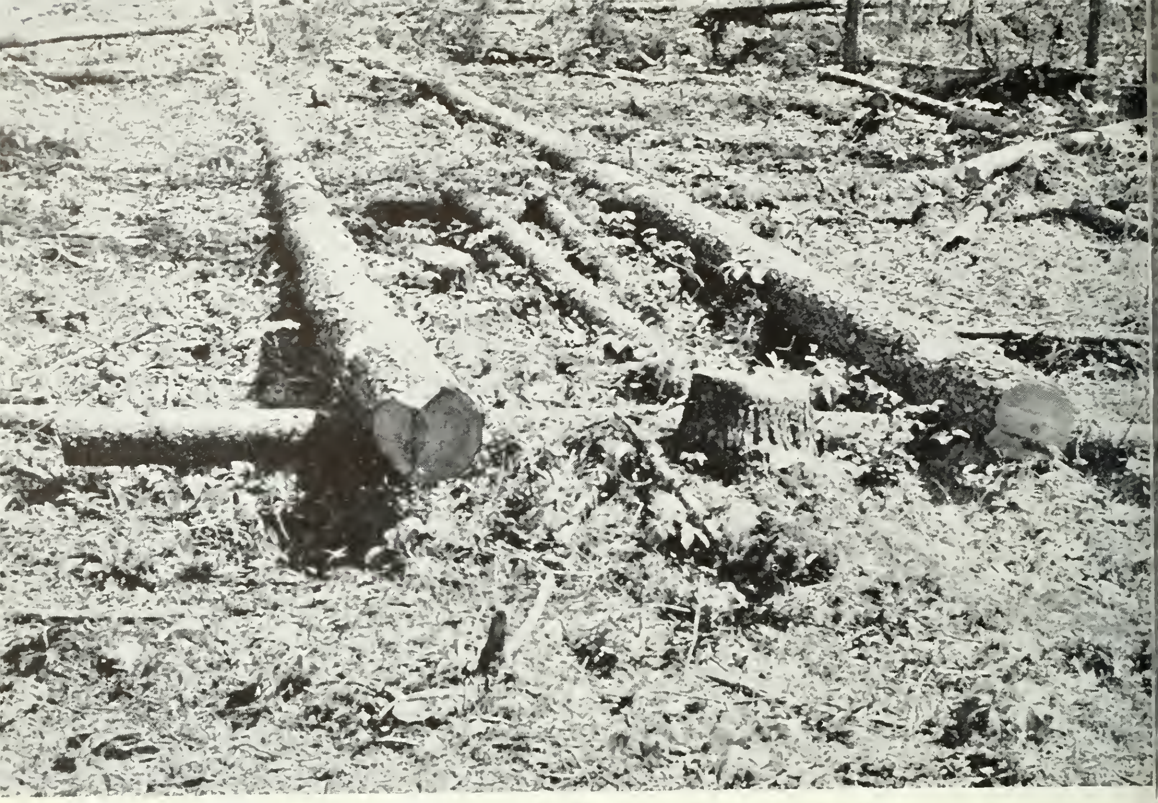
Brush should be spread close to the ground, to distribute the seed remaining in cones. A stiff penalty (five cents per inch of diameter), shared between operator and cutter and uniformly applied, would eliminate gross waste in tops.

(3) Further penalties, such as triple stumpage rates, should be provided and applied for all material felled but not delivered to piles or rollways for measurement. (I believe that company



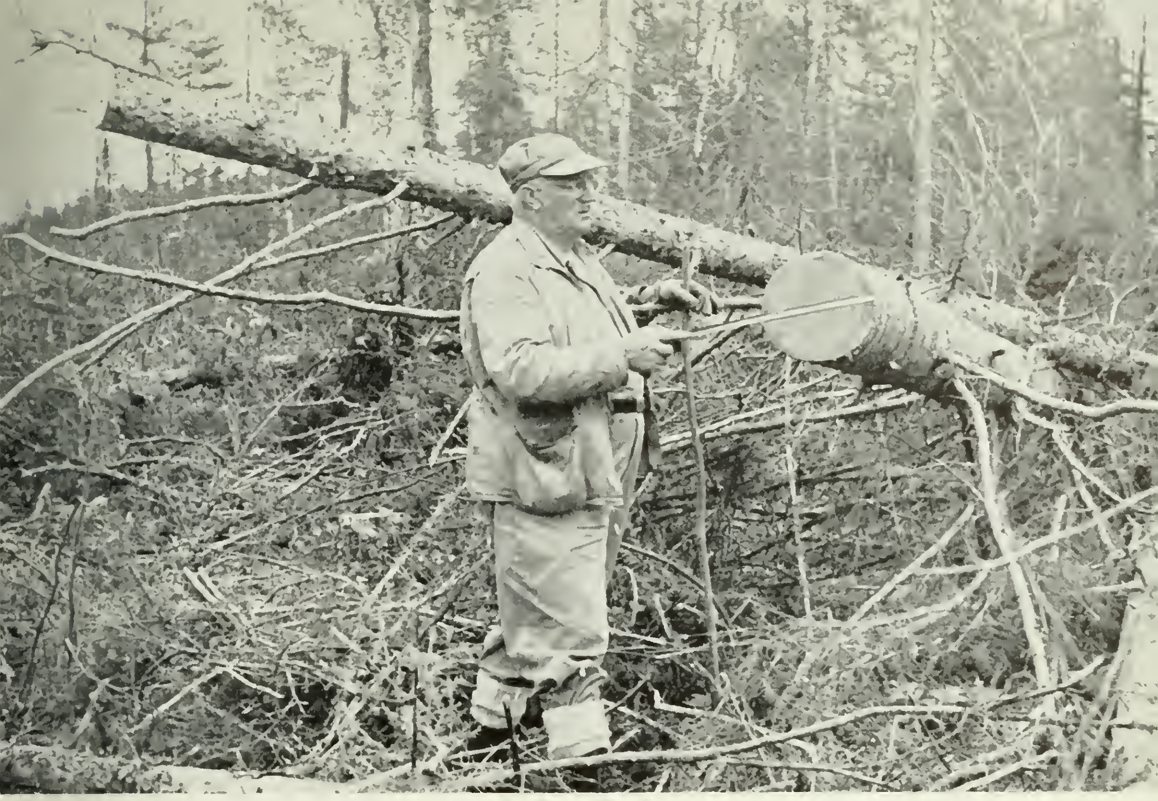
Ten-inch jack pine top wasted. (Domestic pulp and paper company.)

Tops left on a jack pine sawlog operation. Such wasted material would be excellent for making kraft paper.



Waste on a sawlog operation. Abandoned jack-pine skids measuring $10\frac{1}{2}$ inches at the butts and $4\frac{1}{2}$ inches at the tops.

Woods waste. Discarded red-pine skids, 50 to 60 feet long, two of which were 13 inches in diameter at the butt ends. (A domestic match-splint company.)



Bad utilization. A balsam top 10 inches in diameter, 20 feet long and a spruce top six inches in diameter, 16 feet long. (Pulpwood-exporting company operation.)

executives would be appalled if they realized the extent of lost effort and material from this source.)

(4) Where clear-cutting methods are permitted, merchantable trees of all species should be removed in a single operation, with suitable penalties such as double stumpage rates on trees which are left on areas cut over, unless they are undersize or are needed as seed trees. Otherwise, trees which are not wind-firm will blow down, mature trees will disappear before the next cutting and most of the remainder will die of sunscald when the surrounding trees have been removed.

(5) It is possible that a light initial cutting (30-40 per cent of the mature trees) should be made on some sites and of some species to open up the crown cover and permit seedlings to get established. This could be followed by a final cutting to remove the remainder as soon as the next crop is assured. In any event, the rule should be established that any area cut over must be left in a condition which promises a future crop of timber as good as that removed. Only in this manner will the joint responsibility of the operator and the Crown be discharged.

(6) When logs are placed in "rollways" or "skidways" they are piled on parallel poles known as skids, which often lie flat on the ground and are frozen in place when the logs are removed. On

sawlog operations, these skids are usually of pulpwood species which the operator has no right to cut. The practice of leaving skids often applies in the case of pulpwood cut in log lengths. Dead trees or poplar or white birch which are not usually removed from the forest, would serve equally well. The aggregate loss from skids left behind is tremendous and while some of it is measured and charged to the operator, the Province loses income from the further processing of the wood. I recommend that in future all skids of merchantable species be measured and charged to the operator. If they are not hauled out of the woods, double stumpage should be charged.

(7) In removing pulpwood, the lower layers of piles are sometimes left because they are frozen to the ground, and it would delay operations to loosen them. As hauling is done by piecework, they are left to rot and again the Province loses the extra revenue from processing. I recommend a penalty of double stumpage charges on all wood so left.

(see picture on page 22)

(8) Trees of all coniferous species in practically all parts of the Province, but particularly white and red pine in Eastern Ontario, are being cut before they reach maturity. The high prices paid by "black market" operators has recently accentuated this practice. Many of the trees so cut have just reached the stage where they are putting on their best growth and their cutting

Waste on a pulpwood, tie and log operation. Wood cut but not taken out of the woods. (Pulpwood-exporting company operation.)

Sawlogs were cut from the jack-pine stand on the right and much timber was left to die of sunscald and blowdown. On the left the same stand is uncut.

may be compared to slaughtering calves instead of full-grown beef animals. Drastic action is needed if the practice is to be curbed and, unless specifically authorized by the Minister or Deputy Minister, I recommend that cutting of the following species on Crown lands be forbidden under penalty, except as follows:

white pine—not less than 18 inches in diameter 12 inches above ground or 125 years old.
red pine—not less than 16 inches in diameter 12 inches above ground or 75 years old.
spruce—not less than 14 inches in diameter 12 inches above ground or 100 years old.
jack pine—not less than 12 inches in diameter 12 inches above ground or 70 years old.
balsam—not less than 10 inches in diameter 12 inches above ground or 60 years old.

FIRE PROTECTION

It has been noted that there is a tendency to minimize the disaster resulting from fires in cut-over areas and in young forests which do not yet carry timber which has reached merchantable size. I submit that this is an exceedingly harmful attitude to adopt, as these areas are the ones which should provide the timber for the next generation or two. It would be comparable to argue that a disaster causing many fatalities in a boys' school was not really serious economically as none of the boys had yet commenced work at his career.

Fire in mature stands is at all times wasteful as regards present timber resources and every possible measure must be taken to prevent it, but fire in slash following operations or in young stands not yet producing seed, is doubly disastrous as it normally leaves a barren. Fire in mature timber is usually followed by a good future crop; in fact, some of the best pulpwood stands in Ontario are the result of past fires in mature timber. Chapter X deals with fire protection.

DESCRIPTION OF LIMITS

Areas described in licenses and agreements sometimes overlap and in some instances conflict through the granting of similar rights on the same area to both types of limit holders. The descriptions of other limits are qute inadequate, making trespass easily possible and difficult to establish without survey. In many cases, areas are described but the limit lines have not been established. One license which lapsed in 1946 granted rights to cut a million board feet of lumber in Quetico Park but the area to be cut over was only roughly described and situated within a block of 48 square miles, carrying probably ten times the quantity of timber permitted to be cut under the license. The result can only be deplored.

CHAPTER VI

Private Lands

AREA INCLUDED IN STUDY

In this chapter, a study is made of that part of Southern Ontario which lies outside the districts protected against fire by the Department of Lands and Forests. The counties or parts of counties involved are clearly indicated on Map No. 10.

Much privately owned land and many thousands of acres of woodlot, actual or potential, are located to the north and west of the area studied. Soil conditions, climate—particularly precipitation, existence of roads, communities, social amenities and local markets, however, manifest the greater importance of the area on Map No. 10 and the data in this chapter relate to it Many of the recommendations made are equally applicable to the more northerly part, but it must be realized that, on the basis of yield to the Province in social or economic benefits per dollar spent, the northerly part cannot compete with the area shown on the map.

The area covered, which includes some Crown lands, amounts to 34,600 square miles (22,121,000 acres), or about 10 per cent of the Province. A large proportion of the richest agricultural land of the Province lies within it.

FIELD SURVEY

The counties shown on the map were divided into three zones:

(1) Hastings County and eastward to the Quebec boundary;
(2) From Hastings County west to include the Lake Simcoe District;
(3) Huron and Erie Districts.

A forester from the Commission staff was assigned to each of these zones and he was conducted and guided by personnel of the staffs of the District Foresters. The Commissioner obtained an over-all picture of the existing situation by paying several visits to each of the three zones.

Examinations of many woodlots were made in every county, usually in company with the owner. County and township officials, officers of agricultural and conservation groups, and manufacturers of wood products were interviewed. Owing to the limited time available, the examinations were extensive rather than intensive, but they covered every major soil-type.

CHIEF PHYSIOGRAPHIC FEATURES

The chief physiographic features affecting forest types are as follows (see Map No. 3):

(1) Pre-cambrian Shield,
(2) Niagara Escarpment,

(3) Sandy Moraines and Plains,
(4) Limestone Plains,
(5) Morainic Hills,
(6) Drumlin Areas,
(7) Marshes and poorly drained lands.

(1) Pre-cambrian Shield

This extends around the northern border of the woodlot area and consists of granite and crystalline limestone. It is more suitable for the growing of trees than for agriculture. In the Tweed District, however, the Townships of Elzevir, Kaladar, Kennebec, Olden and Oso have recently been excluded from the fire-protection area and parcels of land are being sold to individuals, apparently for agricultural purposes. As this area has only scattered sections of marginal agricultural land,is poor in appearance and is traversed by Highway No. 7, it would be wiser for the Province to reverse the process, acquire more of these lands, return them to the forest-protection area and put them back to growing forests. It would be cheaper to buy the portions which do not belong to the Crown and which will naturally reforest themselves, than to purchase and plant similar areas elsewhere.

Hardwood forests, if given a chance, naturally reproduce themselves well and carry heavier stands in unit of wood per acre than conifer forests, but plantations of hardwoods to date have not generally been successful in this part of the American Continent. This is most important, as much recently cut-over land throughout the Province could be purchased and would return to hardwood forest by natural means more quickly than would areas which have to be planted. Furthermore, natural-reproduction costs per acre would be lower than the bare planting costs on areas which have to be so treated.

Forest fires were very prevalent in this area many years ago. The last one of serious consequence occurred in 1913, an indication of the tremendous strides made in fire protection since those early days. Although many barren and rocky hills are noticeable, much of the area is covered with a second growth stand 40-60 years old. At this age pine trees are just entering their period of best growth and as the tree increases in diameter, not only is volume increase per year tremendously accelerated, but the grade of lumber that may be sawn from it improves at an even faster rate. This fact has not been grasped, or is ignored, by almost all private landowners whose forests contain growing pine; and it would seem that, in their own and their childrens' interests, they should be protected from their folly.

Cutting of immature pine or other species is very widely practised and I believe it could be controlled through the licensing of sawmills. Provision of license cancellation for sawing undersize logs would quickly reduce the practice to negligible proportions.

(2) The Niagara Escarpment

This consists of a long series of steep slopes which extend from the Niagara River to Owen Sound. Much of it has been cleared for agriculture but it suffers badly from both erosion and drought. A programme of reforestation of denuded areas is necessary.

(3) Sandy Moraines and Plains

These consist of the sand plains of Eastern Ontario, the glacial moraines of Central Ontario and the sand deltas of Western Ontario formed where the glaciers entered the lakes of the glacial era. Portions of these sandy moraines and plains have supported agriculture in the past, but many of the farms have already been abandoned because their occupants could not make a living from them and it appears that the rate of abandonment will be accelerated if and when present prices of farm commodities recede.

Much of the reforestation done in the Province has been confined to these areas and they contain most of the existing county forests. They form a fruitful field for the practice of forestry, particularly the growth of conifers. Mute evidence of the once splendid growth of pine that covered them still exists in the form of pine stumps several feet in diameter.

It is recommended that the main effort of any enhanced scheme of forest plantations be largely directed, in the earlier stages, to these areas, as such a course would prove extremely sound economically, in addition to conferring all the social and secondary benefits inherent in the growing of forests.

(4) Limestone Plains

Much of this land is now used for grazing cattle and this practice appears to be profitable. The situation should be closely watched, however, as tree growth does not appear to balance the mortality in the forested area due to grazing and cutting.

As the shade disappears, drought conditions are accentuated and, particularly in Lennox and Addington County, the thin soil covering over the limestone is disappearing. During dry spells, the animals' hooves powder the light soil covering and it is washed away with the first heavy rain. Reforestation of these areas, if attempted, will pose many problems yet unsolved and research should be undertaken to discover method and species best adapted to fulfill the needs.

(5) Morainic Hills

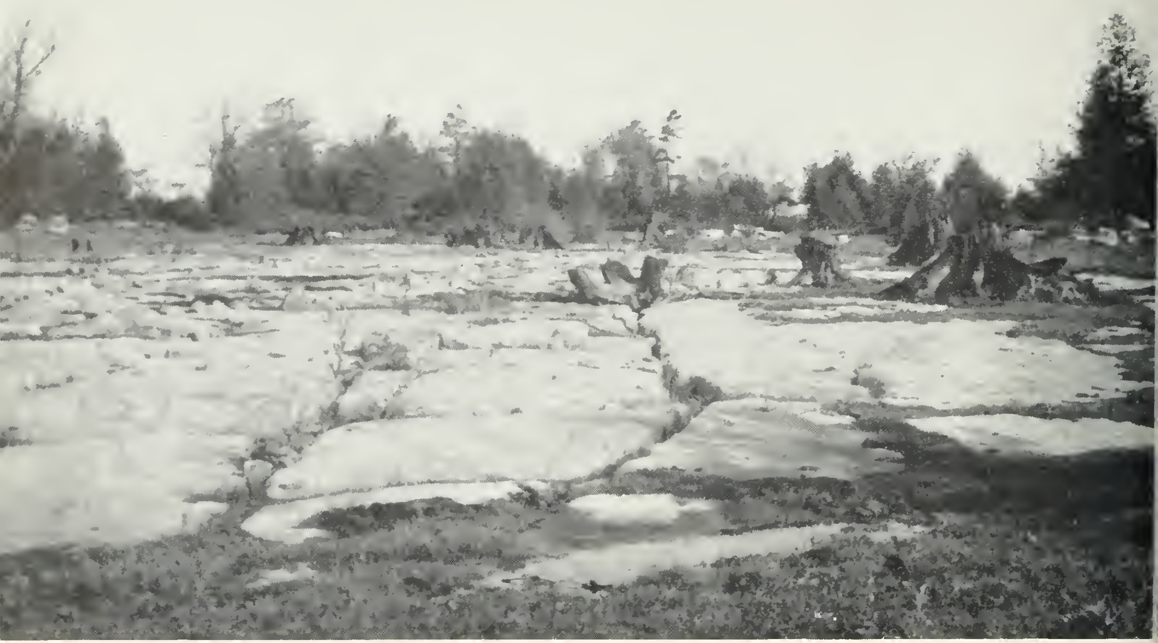
These hills, formed during the glacial period, occupy a horseshoe-shaped belt of rough and stony land in Western Ontario. Some good livestock farms are located in the area, but generally speaking the stony ground and the steeper slopes should be in forest if they are to be utilized for their optimum community value.

(6) Drumlin Areas

Areas of this type occur mainly in Grey, Bruce and Wellington Counties. The characteristic round-topped sand and gravel hills are also a product of the glacial period. They are admirably suited to the growth of trees and are of little value for any other purpose, yet both sides and tops have been cleared for agriculture, with serious erosion resulting in many instances.

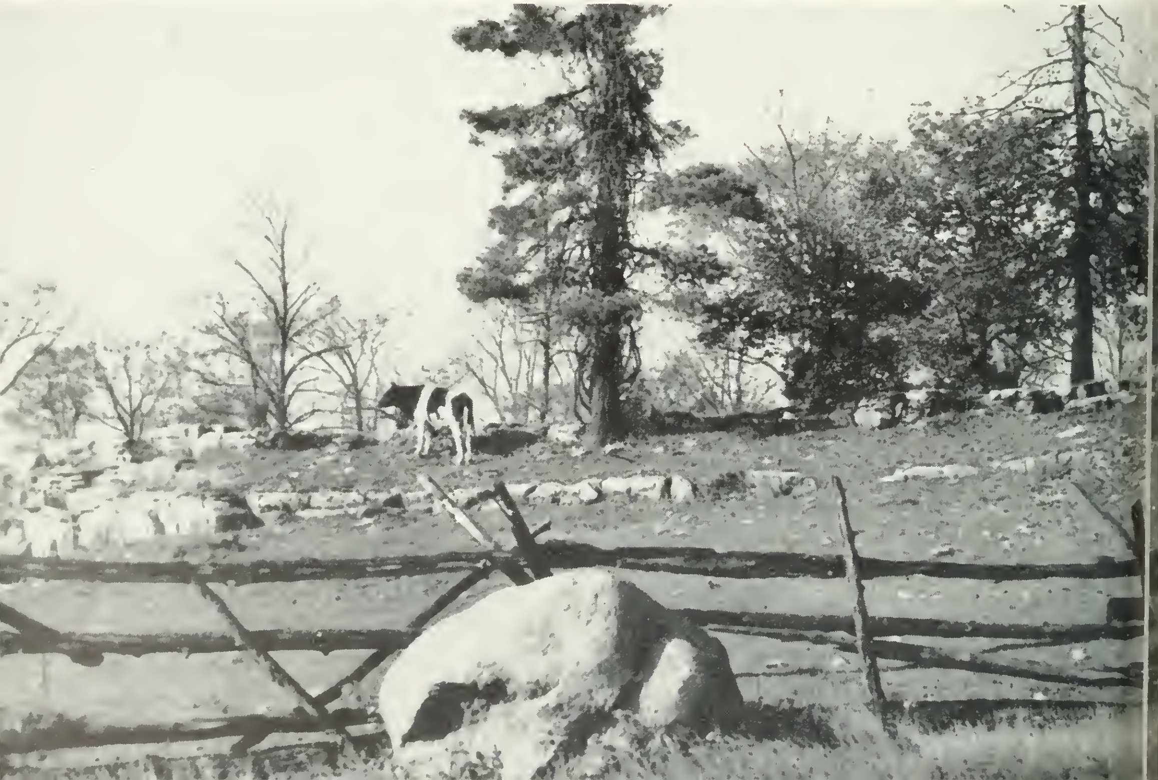
(7) Marshes and Poorly Drained Areas

These areas are widely distributed in patches throughout Southern Ontario, with the more extensive ones in Dufferin, Peel and Grey Counties and in the



Poor land-use. Starvation pasture on thin soils over flat limestone. North of Napanee. Note stumps of large pine trees which once grew on this land.

Questionable land-use. Low-grade pasture on thin soils with limestone outcrops and glacial boulders. Near Roblin, Lennox and Addington County.



northern portions of Ontario and York Counties. Where these lands have been cleared they normally return to scrub willow and are utterly non-productive, although for the most part they naturally had a covering of cedar, tamarac, elm, ash and soft maple.

In any widespread effort of county or provincial reforestation, such land is not likely to be as productive of economic returns as better-drained sites. As little is known of how they may satisfactorily be returned to tree growth, **it is recommended that research be started here also as to method and species most suitable for reforesting such areas.** They form some of nature's most efficient water-holding agencies and therefore are extremely important in the maintenance of stream flow and water tables.

A tendency to overestimate the value of draining swamps and marshes has been indicated in the past and the practice is sometimes mooted for future land reclamation. Such schemes should be individually scrutinized and the best expert advice obtained as to their over-all effect. Marshes drained for the growing of onions in Western Ontario, in some instances, are subject to extremely destructive soil-drift. Unless wind-breaks are planted or restored, it seems possible that in another quarter century some of the present onion beds may develop into lakes during a considerable portion of the year. I have seen $3\frac{1}{2}$ cubic inches of soil obtained by melting a cubic foot of snow taken from a drift in the vicinity of an onion field.

It must not be supposed that the draining of all marshes is unwise. The Holland Marsh, for instance, is an example of the other extreme, where no water storage is involved and the land reclaimed is probably put to the highest land-use possible.

STATISTICAL INFORMATION AVAILABLE

There is a great lack of fundamental data on the woodlot problem in Southern Ontario because:

(a) Statistics available regarding areas and their values are compiled chiefly from reports of Township Assessors whose methods are not standardized, with the result that they are in many instances scarcely comparable.

(b) Woodlot owners generally do not know the volume or area of their forests nor the sales price obtained per unit of volume. Sales, when made, are usually on a lump-sum basis for the material on a woodlot or for a given number of logs of unspecified size. Most owners have no idea of the quantity or value of material cut for their own use.

(c) There is a lack of comprehensive data concerning types and values of products, numbers of people employed, wages paid, etc., for woodworking establishments and sawmills in any specific area of the Province. The source of raw materials for many of these establishments is known only to the owner and in many cases it is outside the Province or the Country, although the industry originally used local material.

(d) The vast majority of woodlot owners have no idea as to the location of a suitable market for much of their material, nor do they have any adequate knowledge of its value or how it should be measured. As a result, much high-value material is sold to local sawmills at a standard price and utilized for inferior purposes, while plenty of high-grade material is used or sold as firewood. For instance, white ash, if sold for handles for tennis racquets or for station-wagon bodies, could easily return to the producer several times what he can get for it at the local sawmill or as firewood. The retention of Doyle rule as the official log scale of the Province has served to discourage many forest owners from placing their logs on the market; conversely, it has served to enrich many greedy buyers at the expense of the forest owner. A marketing section within the Department of Lands and Forests, which can be of service in these matters, will be discussed in a later portion of this chapter.

SHRINKAGE OF FOREST COVER

Assessment figures for 1943 indicate the woodland percentage of the various counties in the area included on Map No. 10 to be as follows:

	%		%
Essex	2.8	Elgin	8.2
Peel	3.9	Lambton	8.2
Wentworth	4.0	Prince Edward	8.4
Kent	4.4	Bruce	8.7
Brant	4.6	Grey	8.8
Durham	4.6	Haldimand	9.1
York	4.7	Simcoe	9.3
Wellington	5.1	Northumberland	9.3
Russell	5.1	Waterloo	9.7
Welland	5.5	Victoria	10.6
Dufferin	5.6	Grenville	12.5
Oxford	5.7	Norfolk	12.6
Lincoln	5.8	Carleton	13.5
Perth	5.9	Glengarry	15.4
Halton	5.9	Leeds	19.6
Huron	5.9	Frontenac	8.8*
Ontario	6.3	Peterborough	18.2*
Middlesex	6.4	Lennox and Addington	18.7*
Dundas	7.0	Hastings	20.4*
Prescott	7.3	Lanark	23.7*
Stormont	7.9	Renfrew	27.5*

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*This percentage applies only to that part of the County outside the fire-protection area.

The total acreage of the territory under discussion, as mentioned before, is 22,121,000 acres. In 1901, the assessed acreage within this area was 18,827,100 (remainder Crown lands, etc.), of which 3,124,500 acres or 16.6 per cent was woodland.

In 1943, the assessed acreage was 19,131,400 with woodland shrunken to 1,848,100 acres or 9.7 per cent, a reduction of 41 per cent. For maintenance of water levels, prevention of erosion, soil drifting, etc., European authorities argue that not less than 20 per cent of the land surface should be under forest and in Germany, where land value was exceedingly high in pre-war years, 28 per cent of the land area was maintained under tree growth.

In Old Ontario, this percentage of forest cover has shrunk to 9.7 per cent and devastation of woodlots is proceeding at an accelerated pace due to continuing needs for large quantities of firewood from diminished forest areas and the unprecedented demand and high prices now paid for lumber, which in turn have given a tremendous impetus to the worst type of jobber, whose only thought is to cut the timber and realize on it while the boom market holds.

Various groups who have studied the question estimate that up to 8,000 square miles, or 5,120,000 acres of waste land in Old Ontario should be returned to forests. There are no accurate figures available but the Commission staff is convinced that at least 2,500,000 acres, and probably more, might profitably be reforested.

At this point it is emphasized that of the 1,848,100 acres of existing woodland (on 118,600 farms within the area studied), not more than 10 per cent could possibly be classified as *good* forest.

WOODLOTS

The present situation in Ontario with regard to woodlots is very unsatisfactory, due chiefly to the following:

(1) Owner's indifference and lack of knowledge.
(2) Cost of fencing.
(3) Assessments.
(4) Drainage schemes.
(5) Lack of marketing information.

Item No. 1—Owners' indifference and lack of knowledge.

Woodlot owners may be divided into two classes:

(a) A minority who are interested for various reasons, and
(b) The great majority who are not interested but who happen to have woodlots.

Most of the people interviewed were those in Class (a) above, because they were known to the District Foresters. Few owners maintain woodlots primarily to obtain revenue from them, but consider them a necessary source of supply of material for their own use, such as posts, fuel, maple syrup, etc., or that they serve the general community in maintaining water levels, preventing soil erosion, etc. These owners rarely cut a tree unless it shows signs of decay and are proud of this fact. Not one man interviewed took pride in producing high-quality trees, or managed his land for wood-crop production in the same way that he manages and plans his field crops. The vast majority of woodlot owners who are in Class (b) use the woodlot for pasturing cattle and gathering from it what fuelwood they may need.

How to convince this latter group of woodlot owners of the potentialities of their holdings under long-term planning is one of the most difficult problems awaiting solution. Many recommendations have been received concerning educational effort to this end in the schools, but the beneficial effect of such educational programmes will not be felt in a substantial way for some decades. These woodlot owners do not belong to agricultural or conservation clubs or societies where their problems may be discussed, nor do they read the excellent government pamphlets which are available concerning woodlots. Few of them know that there are District and Zone Foresters located across the Province to advise and assist them, nor do they know of the beneficial legislation which has been enacted over the years regarding reforestation of their denuded lands and maintenance of existing forests.

There is urgent need for the inauguration of immediate restorative measures, as well as for the control of the exceedingly destructive methods practiced by so many operators who purchase and remove timber from Ontario's woodlots. In general, all species and all sizes are included in the purchase of such stands. The material suitable for sawing is usually removed first and the remainder is sold to a firewood dealer. If, as is usually the case, the lot is then used for pasture, the cycle of devastation is complete and instead of a forest which, wisely utilized, could continue to pay good dividends to its owner in perpetuity, there remain a few acres of indifferent pasture which will rarely yield a noticeable return.

As already stated, the ignorance and lack of interest on the part of landowners is a serious problem to be faced in developing a comprehensive plan of forest management in Southern Ontario. It is foolish to consider replanting millions of acres to forests unless the owners of the millions of acres already under forest are convinced of the necessity and economy of caring for them in such a manner that they will be perpetuated and improved. The trend until now had been toward deterioration and disappearance although, as mentioned earlier, it is cheaper and easier to maintain in production and improve an existing woodlot than to plant an equal area and tend it until its crop is ready to be cut.

Woodlot clear-cut for fuelwood. The soil is thin on partly exposed rock. Such land is unfit for agricultural crops or pasturage and will yield negligible revenue for forty years or more. Bruce County.

The public are inclined to criticize the methods of operation of Crown lands and their administration. I can truthfully say that the operations on Crown lands, now and in the past, have rarely exhibited any instances of such poor forestry methods, or so little thought or consideration of the future, as is to-day exhibited on more than 75 per cent of the farm woodlots throughout the Province. There is, it is true, a pitifully small minority of woodlot owners who manage their forests wisely and well and are reaping a rich harvest from them. I estimate this group to include less than two per cent of the woodlot owners.

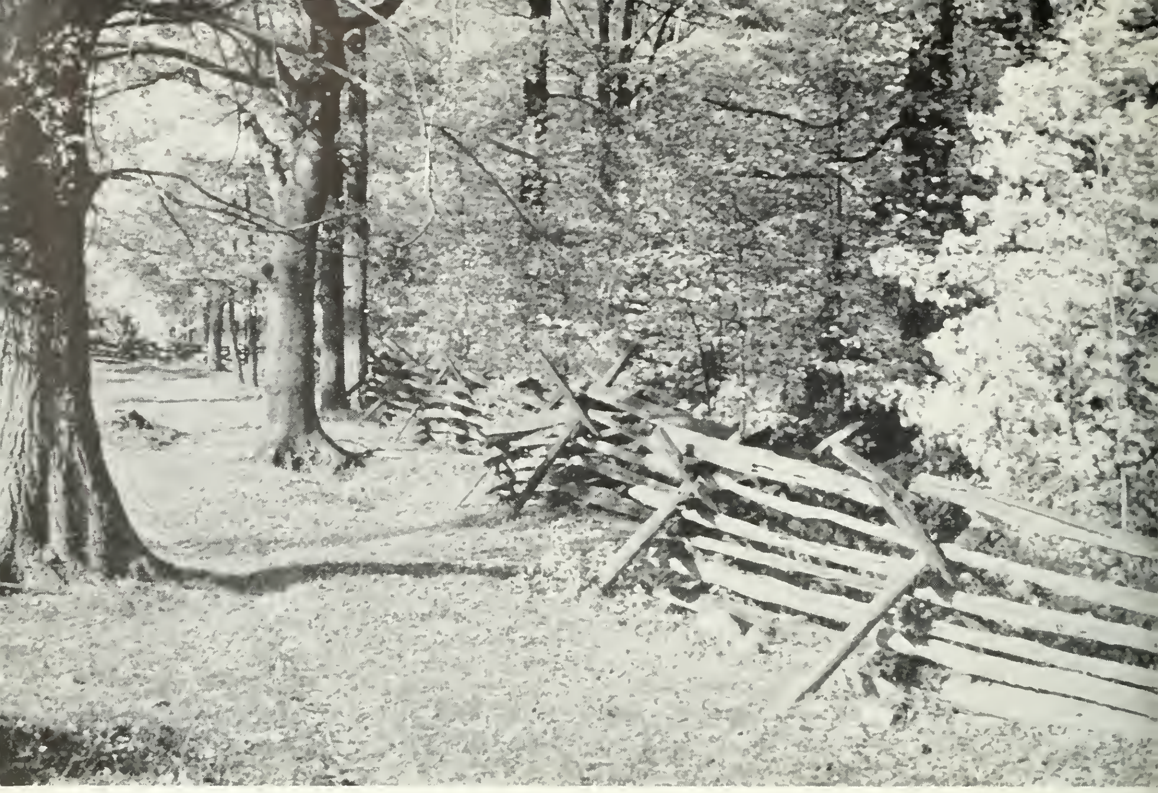
Many who do not abuse their forests by using them as pastures, overcutting, etc., do not harvest them wisely for, as mentioned earlier, they cut only the trees which show signs of defect. This practice is equivalent to using only the defective apples from the barrel, with the result that one never gets a good apple. Trees should be cut when they have reached their prime and the space they occupy utilized for growing more trees. Defective and crooked trees should be removed and the healthy and straight ones allowed to benefit from the sun, rain and nourishment which will otherwise be wasted on the inferior members. Only in this way can a forest yield its best. There are forests in Europe which, after several hundred years of cutting, are as good as or better than the original stands. The practice of forestry refutes the adage that one cannot eat one's cake and have it.

The most widespread abuse of forests is that of utilizing them as pasturage for animals. If this practice alone could be eliminated, more than half the battle to save Ontario woodlots would be won. Forestry and pasturage cannot succeed on the same piece of ground, as diametrically opposite conditions are necessary for each.

Evidence has been given by competent authorities that an area of open pasture will maintain from six to twelve times the numbers of animals that can be maintained on a similar area of forest. Many farmers are deceived because a part of the area used as pasture is cleared and a part wooded. Most of the increase in size and weight of their animals is gained on the cleared portion of their pasture area, while the wooded portion is ruined by the destructive action of the cattle and furnishes them with little nourishment.

If one studies the ground surface in a well protected forest, it will be noted that there is a coating of humus, sometimes several inches in thickness, resulting from decaying leaves, twigs, bits of wood, etc. This is most important as it acts as a sponge to prevent the rapid movement of water and to hold it until it is absorbed into the ground while, in addition, it serves as a blanket so that the ground is frozen less deeply than in the open. The movement of trees by the wind ensures cracks in the soil which permit of deeper penetration of water, and the humus serves to keep these cracks from being clogged. Humus is also the habitat of most of the complex but necessary and beneficial insect and small animal life in the forests.

Where cattle are pastured, the humus is tramped down and can no longer fill the above functions. Tree roots become exposed and a prey to fungus diseases which result in dead tops and poor growth. At the same time, the saplings are denuded of leaves eaten by the animals and the seedlings are eaten or tramped down. A comparison of pastured and unpastured forest land is vividly portrayed in the accompanying pictures.



Pastured and unpastured woodlots. Note the thrifty young growth to the right of the fence and its absence on the grazed area. Grey County.

A well-stocked, all-aged woodlot with a good crop of seedlings typical of ungrazed stands. Grey County.

Item No. 2—Cost of fencing

The cost of fencing and its maintenance has been a big factor in the deterioration of the Ontario woodlot. It would be poor economy not to remove this factor, as the cost of fencing woodlot areas is much less than the cost of planting new forests. Many recommendations at the public hearings of the Royal Commission were for government or county assistance in fencing woodlots. **I recommend that the Province and the Counties share in a programme designed to provide half the cost of fencing the woodlots or repairing, to a proper standard, the woodlot fences of any property owner willing to enter an agreement with the Department of Lands and Forests. Such agreement should provide for proper care and perpetuation of existing forests or new plantations, and must carry the approval of the District Forester.**

Item No. 3—Assessments

Present legislation concerning assessment practices on forest land may easily result in discouragement of sound forestry. Assessments up to $50.00 per acre on woodlot areas is fairly common. In some instances, County Assessors are permitted to assess mature woodlands up to $75.00 per acre in Townships where the best farm lands are not assessed above $50.00 per acre. This is obviously taxing the crop on the land rather than the crop-producing value of the land, and does not take into account the fact that it has taken many decades to produce the forest, with high taxes in effect on it throughout the years.

The unsoundness of such taxing becomes most apparent if the owner decides to destroy his forest and to cash in on his forest crop. The same acres which were taxed so heavily may be sold to "cut-out and get-out" jobbers who remove everything but the small limbs and stumps, whereupon the owner can have his land re-assessed as "slash" land at rates as low as $2.00 per acre. This low assessment rate is also detrimental to the practice of forestry, as it permits typically forest land to be utilized for low-grade pasture or left in idleness or near-idleness when it should be kept under forests.

As a solution, it is recommended that an equalization of taxation rates be undertaken, with a reduction in taxes on lands already carrying good forests, and an increase on lands which are barren or near-barren but which are potential forest sites and would develop their highest economic and community utilization if retained for or returned to the growing of trees.

Justifiable assessment rates ranging, say, from $6.00 to $12.00 per acre, based on capacity to produce forests (some sites are better than others) would remove the unjust burden from the more highly taxed forest lands and place the levy on those lands which have been relegated to an inferior use because of the ignorance, short-sightedness or cupidity of the owners. The higher assessment on forest lands within the latter group would induce either reforestation or abandonment of the lands for non-payment of taxes; in the latter event, the municipality, county or Province could include them in a wider scheme.

There will be difficulty in overcoming the objection of municipal taxing agencies to the adjustment of their taxation structure, but without some such adjustment it is unlikely that in the near future there will be any significant action on the part of individuals toward utilization of typically forest-lands for the growing of forests.

It is also submitted that there is little of value in existing Statutes which permit municipalities to exempt from taxation up to 10 per cent of a farm, a portion of which has been divorced from pasturage and devoted to forest growth, either as a natural forest or as a plantation. It may readily be appreciated that such exemption, amounting usually to a couple of dollars per year (and rarely over five dollars) on lands already assessed at low value, is little inducement to an owner to plant and care for a forest which requires several decades before it commences to yield economic returns.

Bonus in lieu of tax exemption

Several recommendations have been made that a bonus be paid to any forest owner who, eliminating pasturage, will maintain his existing forest, or plant and care for a new one.

I consider that such recommendations are soundly based and have much merit as both the Province and the local community would gain from the enterprise of the individual earning the bonus. The community benefits are many: the countryside is beautified; water tables are improved; stream-flow is maintained and improved, and habitat provided for fish and wildlife, thereby enhancing the recreational value of the district. **I therefore recommend that the Province and the Counties jointly explore some method by which a yearly bonus of the nature recommended may be paid on young forest stands until they reach the production stage, provided they are cared for in a manner approved by the District Forester.**

Item No. 4—Drainage schemes

The drainage of agricultural lands has been the subject of Provincial Legislation over a long period but the schemes which have been carried out, particularly in recent years under the provisions of the Statutes from time to time in force, have proved most detrimental to woodlands in parts of the Province.

The principal Statutes now in force dealing with drainage matters are The Municipal Drainage Act, R.S.O. 1937, ch. 278, and The Ditches and Watercourses Act, R.S.O. 1937, ch. 350. These Statutes are merely the present day versions of the laws which have been in existence for many years. There have been amendments and changes in procedure but it is important to realize that the spirit and intent of the earliest Statutes have been preserved to the present time.

It must be conceded that in early days, drainage was necessary, if not vital for the cultivation of most of the farm lands in Ontario, and it was only natural that all drainage should be considered to be beneficial. The idea that the Province might some day suffer from lack of forests and swamplands was probably not even considered, and anyone who expressed such views would probably have been considered a visionary. However, it is rather surprising to find, under the vastly changed conditions of to-day, Statutes still in existence which encourage practices which have already ruined thousands of acres of our essential forest lands, which are causing widespread distress by the lowering of water tables and which give a mighty impetus to the erosion of our valuable agricultural soils.

The Municipal Drainage Act provides for the construction of large drainage works, quasi-public because of their extent and the number of landowners affected. Such schemes are initiated by petition to the Municipal Council who may then have an engineer examine the area, prepare a report, plans, specifications and estimates and assess the costs against the lands to be benefitted. Upon the engineer's report being received, the Council may, by by-law, adopt the scheme and provide for the execution of the work. The cost in the first instance falls upon the municipality which may raise the amount required by an issue of debentures, and is eventually recovered from the owners assessed in the same manner as taxes.

The Ditches and Watercourses Act enables the owner of a small area of marshland, which in its original state may be fulfilling a valuable function, to force on his neighbours the construction of a ditch or drain which may be not only of no benefit to other owners, but even a positive detriment. The operation of this Act is limited to minor projects where the cost does not exceed $2,500 and the drain does not pass through more than seven township lots. The engineer appointed by the municipality to carry out the provisions of the Act has the responsibility for deciding if a proposed drain is required and it is he who decides, subject to appeal, what lands will be benefitted. If he determines that the drain is required, he makes an award providing for its construction and determines what portions of it are to be made by the different landowners.

While it is quite true that under both Statutes the expense is to fall only on the owners of lands which are benefitted, nevertheless the belief seems to persist, among those who are called upon to administer the law, that if land is drained, benefit must ensue. No consideration is given to the fact that the drain may imperil the life of forests along its course by the lowering of the water table, which leaves the shallow root system with insufficient moisture in dry seasons. No provision is made for compensation to owners whose lands are damaged, unless the damage has been occasioned by flooding, upon the assumption, apparently, that it is only this obvious kind of damage which is important.

Evidence was given by an engineer at London, Ontario, indicating that the cost of a drainage scheme carried out to provide an actual or presumed benefit of $500 to one individual, might easily cost up to $10,000 spread over a number of landowners and cause damage to woodlots, soil, wells and ponds exceeding that amount, and without any compensation being paid to landowners who must bear the loss.

Such projects normally follow lower ground where most of the remaining trees in the area are found. Modern ditching machinery and practice provide deep, wide, and straight ditches which will tend to speed up the flow of water to prevent silting and to reduce maintenance costs. Nature's method of preventing erosion is to have the streams meander across the landscape, lengthening the distance and thereby reducing the gradient from point to point. It will therefore be appreciated that drainage schemes normally reverse nature's methods by creating steeper gradients and faster currents which increase erosion. There are many instances where a return to nature's methods would appear to be in the general interests of the communities concerned.

Some drainage projects are necessary and beneficial. On the other hand, however, possibly the majority are ill-considered and unwise, with many of the land-owners concerned annoyed by and antagonistic to them. Some projects are obviously the children of ignorance and spite, and the original cost of the project frequently exceeds the value of the land reclaimed.

I recommend a complete and early review of The Municipal Drainage Act and The Ditches and Watercourses Act with the object of insuring:

(a) that no drainage project will be undertaken until its probable effect upon the community as a whole has been considered by a board of referees composed of judicial and engineering personnel, as well as practical farmers, and the approval of such board obtained;

(b) that no single landowner or small group of owners may be enabled to force an unwanted and even detrimental drainage scheme on neighbouring owners without their consultation and consent;

(c) that the costs of the work will be equitably distributed among the landowners actually benefitted;

(d) that provision is made for payment of compensation to those injuriously affected, and

(e) that Municipalites have power to expropriate areas which it is proposed to drain, when the welfare of the community requires that the area in question should be maintained in its existing state.

I believe that a revision of the above-mentioned acts in conformity with these recommendations should eliminate many complaints, which were drawn to the attention of the Commission and that few, if any, genuinely-needed drainage projects would be prejudiced thereby.

Item No. 5—Markets

A relatively quick solution of the present serious problem of woodlot devastation could be furnished by assisting woodlot owners to market their products. A ready, reliable, profitable and well-advertised outlet for the products of the average woodlot, regardless of the individual quantities or species produced, would engender in the minds of the great mass of owners an interest in the long-range possibilities of scientific forest management. No amount of propaganda, whether in the form of lectures, pamphlets or magazine or newspaper articles, will ever be as effective in convincing a farmer of the advantages in retaining, guarding and improving his young stands, as the knowledge that the trees which he is allowing his cattle to damage, or is tempted to sell to a jobber for a lump sum, will be three to ten times more valuable if directed to their proper market when they have reached their peak value. This knowledge would be most effectively driven home if he were to discover that, by delivering a truck load of a few mixed logs of yellow birch, white ash, oak, maple or hickory to a collection centre in his county, he would obtain $75 to $100 for them instead of the $20 to $30 yielded by cutting them into firewood or by selling his bush to a jobber.

Most farms have a woodlot. There are 1,848,000 acres of woodlot mostly on 118,000 farms in the area shown on Map No. 10. Relatively few woodlots to-day contain a large number of trees which may be sawn into logs of merchantable size, but most of them have some. Due to lack of knowledge on the part of farmers concerning location of markets, values, and the number of feet board measure which may be obtained from a log of a given size and length, most of the potential supply of timber on Ontario's woodlots never gets into its proper economic channel. Even with this present unsatisfactory condition of farm woodlots, the standing timber of merchantable size presents a very imposing total. The annual harvest possible could even now largely provide for our domestic wood-using industries if it were diverted to them.

The extensive furniture industry which located in Western Ontario because of the hardwood forests originally growing there, now depends to a large extent on imports of hardwoods from outside the Province. Hickory and white ash for the handle industry come from the United States. The trees on which these and other industries were founded grew and may be grown again in the districts close to the factories. Sufficient material to permit the industries to live and expand is scattered across the Province on tens of thousands of woodlots. Some means must be found to funnel the material to collection centres from which it may be distributed to the industries which are in danger of starving from lack of it. Whether this may best be done by co-operative agencies or by a Crown corporation is a subject for study, and there need not be the same type of agency in all districts. Either agency could perform the service, and the function of the government would be to assist in organizing the proper flow of material where existing agencies are available and to provide facilities in areas where such do not exist. The government must also supply necessary advice as to cutting methods, what and when to cut, etc.

I recommend that the Government set up a Marketing Division within the Department of Lands and Forests and that the services rendered by the District and Zone Foresters be widely expanded.

Many woodlot owners who think they are very well served with regard to markets would be much surprised to find that in other localities, no more favourably placed, people receive twenty to thirty dollars more per thousand feet board measure for similar material. For example, species used for railway ties or car stakes, etc., can be diverted to higher value products such as handles, furniture, or flooring.

MAPLE PRODUCTS

Any discussion of woodlots in Southern Ontario should contain a reference to the maple-products industry. It is true it does not loom large in the economy of the Province, but it does contribute an appreciable part of the income of those who participate in it. Statistics indicate that from 1910 to 1940 the production of maple syrup dropped by more than 50 per cent (766,300 gallons to 359,900 gallons) while the drop in maple sugar production was even greater (251,100 pounds to 20,800 pounds). This is probably due to two main factors: disappearance of many of the sugar-bushes and a shortage of labour.

DEMONSTRATION WOODLOTS

Demonstration woodlots are located widely across the Province, but to date they have not accomplished results commensurate with their possibilities. Signs indicating demonstration woodlots have aroused interest and occasioned many inquiries directed to district personnel. Motorists and others, however, seem reluctant to stop and examine the woodlots and, as a result, little time or effort has been devoted to them for several years.

I am convinced that if the signs indicating woodlots gave more comprehensive information regarding what was being demonstrated, including rate of growth per acre, content or value at stated intervals, the date at which young stands will come into production, etc., many more people would stop and inspect the notices and the forests. It is not sufficient to put up a sign merely indicating the location of a demonstration forest.

FIRE PROTECTION

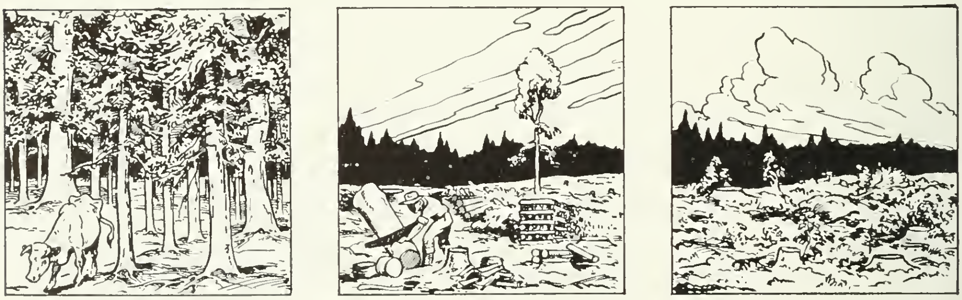
Fire protection is entirely inadequate in the areas adjacent to but outside those protected by the Department of Lands and Forests. Local municipal employees rarely have much knowledge of methods to be employed in fighting fire and, in any event, the necessary equipment is generally lacking.

I recommend that the Department of Lands and Forests be empowered to enter into agreements with adjacent municipalities to protect their forests at a fee commensurate with that paid by limit holders. I also recommend that the Department set up classes to train key fire-fighting personnel for those municipalities too remote from a protection area to justify their being included in it. All the heavily wooded municipalities should be urged to purchase and have on hand sufficient fire-fighting equipment to cope with a crisis when it arises.

It should be mentioned that the Fire Protection Service assists in detecting and fighting fire on private lands up to the capacity of equipment and personnel available, without depriving its own areas of essential services.

PRODUCTION POSSIBILITIES

A glimpse at the present and future possibilities of Ontario woodlots should probably be provided at this time. There is little authentic data applicable to existing conditions and we can only turn to statistics of older countries which have developed forestry practice over a period of centuries.

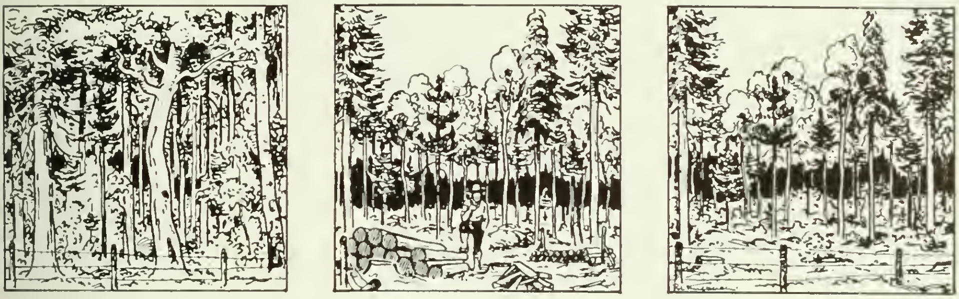


These sketches represent what is happening all too commonly in Ontario to-day. Many woodlots are used for grazing and most are in poor condition. Then they are clear-cut and the bulk of the wood is used for fuel with comparatively little going into sawlogs, pulpwood, or other relatively high-value products. Following cutting, little is left but waste and desolation.

In the mid 1920's, before Hitler had risen to prominence, Germany, with 31,268,500 acres of forest land, was cutting on the average about 48 cubic feet of stemwood per acre per year. This provided, amongst other products, some 200 board feet of lumber. Cuts varied between 28 cubic feet per acre on their more poorly managed stands, to 65 cubic feet on the better managed stands on good soil, with corresponding outturns in lumber of 110 board feet and 300 board feet per acre per year plus other products. In addition, a large quantity of fuelwood was produced from limbs.

Present Possibilities

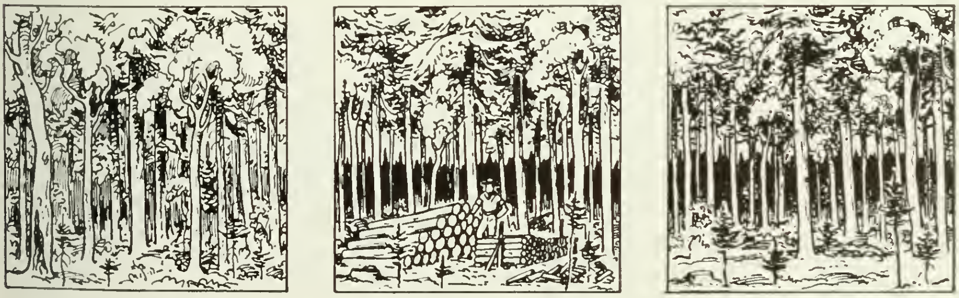
I estimate that Southern Ontario's woodlots could now produce wood on a scale comparable with Germany's poorer stands, or at least 25 cubic feet per acre per year, of which the quantity suitable for lumber would be at the rate of 60 board feet per acre. This is equivalent to a total annual production from all woodlots in the area under discussion of 110,000,000 feet board measure of lumber and some 300,000 cords of fuelwood and pulpwood, in addition to the fuelwood from limbs, thinnings and sawmill waste.



These sketches represent how the woodlot could and should be managed in the near future. First the cattle are fenced out. Then, when cutting is done, it is on a selective basis and as much wood as possible is made into veneer-logs, sawlogs, pulpwood, and other top-price products with only the refuse used for fuel. (The need for fuelwood could be met by drawing upon the forests north of the settled area which could well be used for this purpose for a time.) Finally, when the cutting is finished, a good residual stand is left to form the basis for the next crop.

Possibilities in 30 years

If sound silivicultural methods are developed and implemented, in thirty years' time we might expect to be able to make an annual cut of 36 cubic feet per acre including 100 board feet of lumber. This would be equal to 184,000,000 feet board measure of lumber and 370,000 cords of pulpwood and fuelwood, in addition to the by-products.

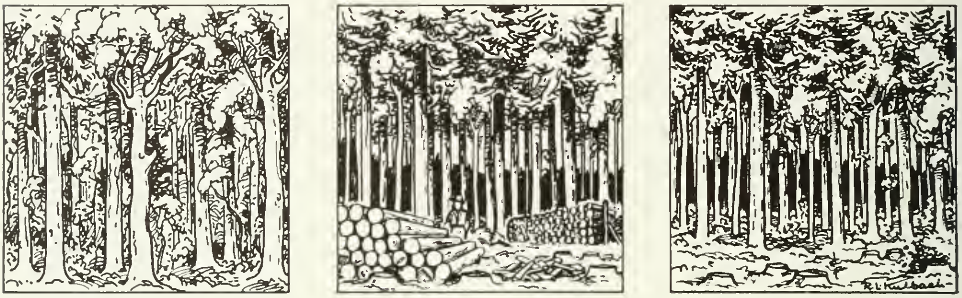


If the policy suggested in the previous set of sketches is carried out, the woodlots will be in a much healthier condition 30 years hence. The yield of good sawlogs and pulpwood will be increased and so too will be the supply of fuelwood, because more limbs and tops will be available for this purpose. If the cutting is done wisely, the quality of the residual stand and the new growth will be increasingly good.

Possibilities in 75 years

At the end of a rotation of, say, 75 years, the forests should have almost reached their maximum development and we could anticipate an annual cut of 48 cubic feet per acre per year, including 150 board feet of lumber. This would equal 276,000,000 board feet of lumber and 425,000 cords of pulpwood and fuelwood, plus other by-products.

In all these figures it must be kept in mind that a sawlog may be used as pulpwood and, if it is more profitable to do so, a considerable proportion of the material shown as lumber above may be diverted to use as pulpwood. Some of the material will be utilized as poles, ties, posts, etc., dependent upon markets.



After about 75 years of careful "farming", the woodlots of Ontario will be yielding their maximum crop of all products—a crop which should be twice as great per acre as it is at present. This could be maintained indefinitely as long as good forestry is practised.

The above figures and charts indicate reasonable possibilities which I believe will be far surpassed as soon as the landowners grasp the possibilities of forestry and allow potential forest lands, now wrongly used as pasture, to revert to their proper use. That the figures are not fantastic is certain, as there are already some of the best forests in the Province putting on growth approaching 100 cubic feet per acre per year.

PLANTING OF NEW FORESTS

The foregoing production possibility applies only to existing privately-owned woodlands. In addition, there are the millions of acres of wasteland which should be replanted. As mentioned on page 71, the Commission staff's minimum estimate of this area is 2,500,000 acres. (It is probably actually much higher, with estimates of various authorities up to 5,100,000 acres.) A large proportion of this area is better suited to conifer growth, though the heavy lands and moist areas should be devoted mainly to hardwoods. This area is much too great to be planted in a few years and **I recommend planting for the first ten years of 100,000 acres annually, commencing in five years' time, the remainder of the area to be planted in the ensuing ten-year period at the rate of 150,000 acres per annum.**

SEED COLLECTION

Any considerable increase in seedlings for planting cannot be expected before three to four years because problems of seed collection and extraction and nursery expansion are involved. Seed in storage is at present at a very low figure due to lack of labour for collection, and this will cause a very serious

Reforestation needed. Note the large pine stumps on the eroding, sandy hill. Near Rockland, Russell County.

A typical blow-sand area. Such land is not only unproductive but it becomes a menace to the surrounding country through sand drifting. It should be reforested.

Blow-sand has made this road unfit for use. Note the plantation on the right which is correcting this condition. Ontario County.

Erosion of clay land on the Lake Huron shore near Port Albert. The gully is about 70 feet deep at shore and extends about one-quarter mile inland.

bottleneck. **Seed collection should be expanded this year to produce about four times the annual quantity of conifer seeds gathered normally, with a less pronounced increase in the volume of hardwood seeds.** (Existing woodlots may be expected to produce hardwoods to an amount of three or four times the volume of their softwood output in the next 30 years.) Years in which seed is produced in abundance vary widely between the species, and in the pines and spruces usually occur at four- to seven-year intervals. Pests of one sort or another, insects, squirrels, etc., often ruin or steal most of the seed unless it is collected within a few days of ripening.

FREE DISTRIBUTION OF SEEDLINGS

Free distribution of trees to private land-owners commenced in 1905 with an output of 10,000 trees. This has increased to 8,000,000 trees for distribution last year. Unfortunately, a study of results indicates a high mortality amongst seedlings distributed to private individuals, particularly in the hardwood species. This is due to improper handling, poor planting and to unwise selection of species in relation to soils. Provincial nurseries could at present produce up to 23,000,000 seedlings annually, though total distribution of all species has averaged about 12,000,000 per annum for the past five years.

The planting of Scotch pine for Christmas trees has accelerated tremendously in recent years and the threat of over-production of Christmas trees would seem to be imminent. Here I should add that planting or cutting young conifers for Christmas trees is not bad forestry and it is not unpatriotic. It is a legitimate industry, usually representing good land-use, with high economic returns per acre. If the thinnings of conifer stands are utilized for this purpose, it can be considered good forestry. Incidentally, a tree which has sufficient branches and is the proper shape to become a desirable Christmas tree, is not likely to develop into a tree which will produce the higher quality of material needed for lumber, pulp, poles, etc.

GROWTH POSSIBILITIES FROM PLANTATIONS

If, commencing in five years, 2,500,000 acres of Southern Ontario are planted in the ensuing twenty years, economic returns from thinnings may be expected to be realized about 1985. These returns will grow progressively as the plantations mature until roughly 100 years from now, by which time all the plantations will have reached, or be reaching, maturity and we may expect a stand averaging 25,000 feet board measure, or over 50 cords, per acre.

The bulk of planting will probably be in red pine, jack pine and white spruce, with some white pine, so that an average rotation between 80 and 90 years should be ample. Even at 90 years this would permit an annual cut of 50 cubic feet per acre per year, or a total of 125,000,000 cubic feet per year. It is doubtful just what form of product markets will demand by that time, but that quantity would produce all of the following:

300,000,000 feet board measure of lumber,
750,000 cords of pulpwood,
500,000 ties,
125,000 poles.

Truly, in forestry one must think in terms of half centuries and centuries, and the countries with the vision and courage to do so will benefit from tremendous returns. To those who think a century is too long to look ahead, I point out that Confederation is 80 years behind us.

In addition to the main benefits of increased production, there will follow all the other secondary benefits, such as control of stream-flow, maintenance of water tables, prevention of erosion, provision of proper environment for wildlife, and improvement in the recreational possibilities and aesthetic values of the Province. Some children now starting to school will live to see the culmination of such a scheme.

PROVINCIAL, COUNTY AND MUNICIPAL ASSISTANCE TO FORESTRY ON PRIVATE LANDS

The problem of reforestation of waste lands in Southern Ontario was apparent to many in the later years of the nineteenth century and this knowledge was crystallized into action in 1904 by the establishment of a lectureship in forestry at the Guelph Agricultural College. The Faculty of Forestry, University of Toronto, commenced to function in 1907 and the next step was the establishment of the Provincial Forest Station in Norfolk County in 1908.

In 1911, the Counties Reforestation Act was passed by which counties, and to a more limited extent townships, were enabled to purchase land and undertake forestry work under thirty-year agreements with the Province. At the last session of the Legislature, this Act was amended to extend to townships the main benefits of the legislation.

Broadly speaking, existing agreements provide that the county or municipality purchase the land and that the Province plant and care for the forests for a period of thirty years. At the expiration of this period, three options are presented to the county or municipality. They may:

(a) Repay to the Province, without interest, one half of the money expended in connection with planting, buildings, equipment, etc., less any income received, and share equally with the Province in future revenues, or

(b) Pay to the Province, without interest, all money expended in connection with planting, buildings, equipment, etc., less any income received, and take full possession, or

(c) Convey to the Province full title to the forest plantation, buildings, equipment, etc., on repayment, to the county or municipality, of the purchase price, without interest.

None of the counties availed itself of this exceedingly generous legislation until 1922 when Simcoe County purchased 1,000 acres of sub-marginal land which now forms part of the "Hendrie County Forest". The County Forests established under the Act, as well as those which do not come under the Act, are shown on Map No. 10.

On the whole, the County Forests seem to be well managed and thinnings are now being taken from some of the earlier ones in the form of pit-props and firewood. **It is recommended that the legislation now existing in regard to County Forests be amended and widened to include cities, towns, villages, individuals, estates and corporations.**

In some counties, if recreational and aesthetic values are to be restored and stream-flow, water tables and soil-erosion controlled, the areas to be reforested are so extensive that the cost will be greater than the county revenues may be reasonably expected to bear. In such instances, where population is sparse and potential forest areas are large, probably the only effective approach to a large-scale reforestation programme is for the Province to purchase and plant the land, recouping itself for such expenditures from stumpage dues when the timber reaches maturity. Grey County probably comes within the above-mentioned category.

There are a number of school plantations throughout the Province. Some are well managed and others very badly managed, the care given to the plantation being generally in proportion to the interest displayed by the teacher.

School forests or plantations could serve a very useful purpose if carefully planned and supervised. Each pupil could look after part of a row of trees or a plot and prizes might be given for competitions to be judged by officials of the Department of Lands and Forests. Pupils should be taught to recognize species, count growth rings and take a general interest in the biological life of the forest. The Ontario Horticultural Association gives annual awards for school competitions and thereby performs a most commendable service.

The following Provincial Forest Stations are now operating or are under development:

Norfolk Provincial Forest Station (Norfolk County)—
Established 1908. Serving Southern Ontario Region.

Midhurst Provincial Forest Station (Simcoe County)—
Established 1922. Serving Lake Simcoe and Georgian Bay Region.

Orono Provincial Forest Station (Durham County)—
Established 1922. Serving Central Southern Ontario.

Kemptville Provincial Forest Station (Grenville County)—
Established 1945-46. (Now under development to serve Eastern Southern Ontario.)

Thunder Bay Provincial Forest Station—
Established 1945. Serving Northwestern Ontario.

BONUS PAYMENTS FOR PLANTATIONS

A few counties and townships have voted monies in aid of forestry activities by individuals. Prince Edward County voted $5,000 toward reforestation in that County. In Fredericksburg Township up to $4.00 per acre has been paid for tree planting, while in Camden, Lennox and Addington County, a landowner can collect for reforestation as much as $6.00 per acre on up to 10 acres. Of this sum, the County pays $2.00 and the Township $4.00. There is some diversity of opinion as to the value of this type of bonus, with claims that these plantations are not as well cared for or as indicative of continued interest on the part of the owners, as those which are the product of the owner's effort.

While reliable statistics are not available as to the area or quality of forest plantations resulting from seedlings supplied to individual landowners, undoubtedly several thousand acres are involved. Encouragement to owners to add to these plantations should not be overlooked.

CONSERVATION AND REFORESTATION ASSOCIATION

This is an association of the Conservation and Reforestation Committees of County Councils. The Association divides the Province into five zones in Southern Ontario and meetings are held in each zone once a year. It is an association whose work should be encouraged and expanded.

THE TREE CONSERVATION ACT

This Act passed in 1946 enables counties to pass by-laws regulating the size of trees that may be cut on private lands and, in general, ensures against any further denudation of already inadequate forest cover. Only eight counties have so far availed themselves of its provisions and it is yet too soon to assess the efficacy of the measures taken. It is difficult to enforce an enactment of this sort unless the general public support it. It is a step in the right direction, however, and with experience may prove to be exceedingly useful in curbing present abuses.

Many recommendations were made to the Commission that the Province, rather than the counties, should exercise such control. It was properly argued that many counties most in need of this type of legislation would hesitate to enact it because of the unpopularity of any measure aimed at controlling the action of an individual on his own property. It was even stated that in some counties a council which passed such a by-law would have no hope of re-election, and that therefore the Province should act.

I am convinced that regulation of the material to be cut in private forests is more necessary here than it is in the Scandinavian countries, where it is the rule. As the community suffers through the destruction of a forest, it may properly be argued that they should have some control over its maintenance. We have many laws already on the Statute Books, such as those concerning noxious weeds, which limit the freedom of the individual in the use of his land. I therefore feel that regulations covering the trees he may cut would not establish any new principle.

I recommend that, as soon as district forest personnel is available in sufficient numbers to supervise such a scheme, provincial legislation be enacted controlling the cutting of trees on private lands.

I maintain that a diameter-limit is not an adequate solution of the problem and never can be. Many trees should be removed as thinnings or because they are crooked or otherwise defective, even though they are below any diameter-limit which might reasonably be set, and the forest would benefit by their removal. On the other hand, a diameter-limit suitable for one species may be entirely unsound for another and might permit the removal of some trees which have barely reached their best growing years.

The trees to be cut should be marked by trained personnel. This is probably the only safe and sensible approach to managed forestry and its application will result in sound economy. It will be five or more years before we can hope to have sufficient trained forest personnel to carry out such a scheme on anything more than an experimental basis.

I feel it my duty at this time to pay tribute to the splendid work that has been done by the pioneers of forestry on private lands within the Province. Headed by Mr. E. J. Zavitz, who was the first and for years the only forester to devote full time to this work, this totally inadequate group of scientists has battled for years against apathy on the part of the public and the consequent lack of funds and personnel necessary to develop a programme which the situation demands. A sound foundation now exists in the nucleus of a staff. Their zeal and courage in remaining in their chosen field, despite obstacles and discouragements which might easily have daunted lesser spirits, have resulted in the introduction of legislation and the establishment of nurseries which have encouraged and facilitated forestry.

ADMINISTRATION

For administrative purposes, the woodlot area of Southern Ontario is divided into six districts, each headed by a District Forester. In some of the larger districts, they have the assistance of Zone Foresters.

The fusion of the administration of Fish and Wildlife activities with those of the Department of Lands and Forests has added a tremendous amount of administrative detail to the work of the District Forester, particularly in the issuance of permits and in accounting. His greatest value lies in field contacts, spreading the gospel of forestry amongst the landowners in his district, and any administrative work which prevents such contacts is difficult to justify.

The amalgamation of the two departments is admirable and practical, but if the cause of forestry on private lands is not to be seriously hampered as a consequence, the District Offices will require additional staff to assist in administrative duties.

The present set-up is as follows:

District	District Forester	Head-quarters	Zone Foresters
Erie	F. S. Newman	St. Williams	H. Zavitz
Huron	I. C. Marritt	Galt	W. Thurston J. C. Jackson
Lake Simcoe	J. F. L. Simmons	Maple	
Trent	A. B. Wheatley	Lindsay	
Tweed	A. Crealock W. W. Tweed, Asst. Dist. Forester	Tweed	W. E. Edwards
Rideau	W. E. Steele	Kemptville	

The District Foresters are assisted by specialists of the different divisions of the Department of Lands and Forests.

Four forest nurseries are located in Southern Ontario, and one in Western Ontario, as follows:

St. Williams
Midhurst
Orono
Kemptville
Port Arthur

I am assured that the efficiency of the nurseries could be improved and costs lowered if they were to be mechanized to a greater degree. United States nurseries now use seeders, transplanters, lifters and tree-planters. In Ontario, the lack of assistants to nursery superintendents is noticeable.

A seed-extraction plant under the direction of Mr. R. S. Carman is located at Angus, Ontario.

The personnel at present administering forestry on private lands can only serve as a nucleus of the staff required for the tremendously expanded programme which is foreseen if adequate measures are to be taken to restore the minimum forest-cover necessary. One trained forest-engineer for each two counties is the minimum technical staff required, and some of the larger and more heavily wooded counties, such as Haliburton, will require the full-time services of a forester. In addition, each forest engineer will require four to six trained Zone Foresters to assist in marking trees, in helping landowners harvest their forest crop properly, and in inspection work generally.

CONSERVATION AUTHORITIES

Under The Conservation Authorities Act of 1946, municipalities may group themselves together to undertake schemes of conservation, restoration and development of natural resources, or for the control of water to prevent floods and pollution, or for similar worthy purposes. One or more watersheds may be covered by such an Authority.

Upon agreement being reached by the municipalities participating in any such scheme, the Lieutenant-Governor-in-Council may establish the Authority, designating the participating municipalities and the area included.

An Authority, properly established, has power to conduct engineering studies, purchase or erect structures, acquire land through expropriation or otherwise, plant forests and assess the costs of its activities on the participating municipalities which, in turn, may issue debentures or otherwise raise the money. Grants to Authorities may be made by the Lieutenant-Governor-in-Council.

Under the Act, three such Authorities have been granted but the plans are not yet approved. They are as follows:

Ganaraska Watershed—Plan submitted to the Department.
Etobicoke Watershed—Survey has been made.
Au Sable Watershed—Survey not yet made.

The following four other watersheds are under study:

Thames Watershed—Survey has been made.
Grand River
Humber River
South Nation River

It has been proposed that the following watersheds be investigated:

Moira River
Don River
Sydenham River

(See Map No. 4 concerning Conservation Authorities.)

The developments by any or all of the above Authorities dovetail perfectly into any major project of reforestation in Southern Ontario. It is desirable that such schemes be fostered by the Government, as much of the Province's waste forest-land occurs on the watersheds of these streams. The waste areas mentioned elsewhere in this chapter include the areas under the proposed Authorities and, for the purpose of this report, money spent in reforestation in the latter may be considered as part of the general expenditures for forest restoration throughout the Province. Every precaution should be taken that these schemes of conservation do not overshadow the necessity for forest plantations and culture in other equally devastated areas.

The Act is administered by the Department of Planning and Development, but the Department of Municipal Affairs and the Department of Lands and Forests are both vitally interested.

FINANCE

Earlier in this chapter it has been recommended that Provincial funds might profitably be expended on forestry on private lands for:

(1) Purchase of lands in townships such as Elzevir, Kaladar, Kennebec, Olden, Oso, etc., to prevent their further devastation.
(2) Expanded research activity as to methods of planting, and species most likely to succeed in swamps and on limestone plains, etc.
(3) Assistance in fencing of woodlots.
(4) Yearly bonus to be paid on young forests until they reach the productive stage.
(5) Increase in seed collection and handling.
(6) Increase in nursery production and free distribution of seedlings.
(7) Expanded programme of county, municipal and individual agreements re forest plantations.
(8) Increase in administrative personnel (District and Zone Foresters and Rangers).

Financing of the above proposals will require a very considerable sum of money during the coming quarter century, particularly if the restoration of denuded areas is undertaken on a scale commensurate with the needs. Most of the proposals would be of a self-liquidating nature and should be considered long-term investments, rather than expenditures.

Reforestation now costs over $300,000 annually, including seed collection and preparation, operation of nurseries capable of producing something over 20,000,000 seedlings, and all maintenance and development work in connection with county, municipal and individual plantations.

I estimate that, in view of the increased personnel needed to carry on the contacts with landowners, in addition to expansion of nursery staff, seed collectors and administrative personnel generally, the new cost of reforestation might be seven times the old figure, or $2,100,000. The other new services contemplated in addition would vary from year to year, but a fair annual estimate would be:

Purchase of land	$100,000
Fencing assistance	15,000
Bonus for planting and maintenance	50,000
Research	25,000
	$190,000

Commencing in four or five years, the total for reforestation and service to woodlot owners would therefore amount to $2,290,000 annually for a period of 10 years, with somewhat increased annual expenditures, possibly $3,000,000, in the following decade.

The spending annually of sums of money of such magnitude can only be justified if the situation is grave and if such expenditure will remedy it. I am convinced that the proposed plan will meet the requirements. I am equally convinced that the expenditures will prove to be self-liquidating, and in addition will provide many benefits. We are in the uneviable position of a people who have borrowed heavily from the future, whose loans are not only due but overdue, and with nothing to show for what we have spent.

It is unlikely that any major rehabilitation project of this nature can be financed out of revenue. The cost of the proposed plan should be considered an expenditure to replace depleted capital assets and the financing done out of capital raised for the purpose. The proposed expenditures for the reforestation of Southern Ontario would therefore be financially unrelated to the revenues from Crown lands situated elsewhere in the Province.

It is the general public, particularly those living in the older portion of the Province, who will enjoy the major benefits resulting from expenditures on forestry on private lands. It is therefore the general public, rather than the forest operators of Western Ontario, who should be the major source of capital for the expanded development of forestry on private lands.

If, as previously recommended in this report, legislation now existing in regard to County Forests is amended to include corporations, etc., trust and insurance companies who are looking for safe long-term investments could scarcely do better than to invest in the future of forestry in the Province. Government Boards, such as the Workmen's Compensation Board, must have difficulty in finding long-term investments, and no better or safer ones could be found than in private forestry. Money invested in forests under such agreements will yield returns which may not be spectacular but will be sure and safe.

I recommend that long-term bonds or debentures be issued, specially earmarked for assistance in reforestation. It is quite possible that many public-spirited citizens and corporations would accept a lower rate of interest than is currently demanded on similar securities, so that they may be identified with and share in the forest programme so necessary to the welfare of the Province.

In ending this chapter I cannot refrain from pointing out that descendants of the original settlers on the farms of Ontario are rapidly disappearing from the farms. I feel that this should not be allowed to occur without a sincere effort to maintain these solid citizens on the land where they can utilize the accumulated skill and knowledge acquired by several generations of their hardy and resourceful forbears.

Forestry could well be the means of making the countryside more attractive and interesting to the rural population and, if wisely developed, can certainly make the off-season for the growing of field crops the most remunerative portion of the year. I believe that if forestry is given a chance, it may well prove the influence which not only will overcome the present attraction of the cities for rural youth, but which may well reverse the flow and draw back from the crowded cities, to their proper environment, many of the sons and daughters who have already left the farms.

CHAPTER VII

Department of Lands and Forests

Before referring individually to the work of the various Divisions of the Department of Lands and Forests, and in order to indicate how they function, a few paragraphs will be devoted to the changes which led to the present administrative set-up.

In 1827, a Surveyor General of Woods and Forests in the Province of Upper Canada was appointed. He was vested with very wide powers under quite specific instructions from the Imperial Government, but the Family Compact of those days was evidently too powerful for him to carry out his duties as instructed. There was much dissatisfaction about the methods of dealing with the casual revenues from the disposal of Crown lands or the timber on them, and negotiations with the home Government proceeded over a number of years.

The Act of Union of 1840, adopted by the Imperial Government, placed under the control of the Canadian Legislature all territorial and other revenues at the disposal of the Crown and, in consequence, a Commissioner of Crown Lands for Canada was appointed to administer these revenues. In return the Legislature undertook certain obligations, including the civil list for the payment of the salaries of the Governor, Judges and other personnel, amounting to $75,000 per annum. The first annual report of the Commissioner of Crown Lands appeared in 1857 as the result of a motion of Hon. A. T. Galt in the House of Commons during the session of 1856.

Following Confederation, the first Commissioner for Crown Lands for Ontario was appointed in 1867 in the person of Hon. Stephen Richards, and the Department of Crown Lands came into being. In 1905, mines were brought under the Department, and it was named the Department of Lands and Mines of Ontario. The following year, 1906, the name was changed to Department of Lands, Forests and Mines and it so remained until 1920, when the administration of mines was segregated and the Department was renamed the Department of Lands and Forests.

In addition to mines, various other branches dealing with settlement, roads, game and fisheries, northern development, etc., have grown up with the Department as their parent. During 1946 the Department of Game and Fisheries returned to the Department of Lands and Forests and now carries on as the Division of Fish and Wildlife.

With the passing of years, many changes in administrative set-up have occurred. In earlier times there was a Crown Timber Agent and a Crown Lands Agent in each District and their work was not co-ordinated so as to achieve the best results for the Province. For many years there was a Provincial Forester whose work had to do with forest inventories, timber growth, nurseries, fire protection, etc., but the Crown Timber Agents supervised all cutting and seemed to look upon District Foresters as visionaries whose views on forestry were far from practical. If the views of these technical men had been heeded, the forests of Ontario would be in much better condition than is the case to-day.

Through the past quarter century there has been a tendency to centralize and consolidate the various activities of the Department so that they work in harmony with one another. The present Deputy Minister is much to be commended for his efforts toward this end. As such consolidation in a civil service organization presents many difficulties, due to the tendency to perpetuate old customs and methods as well as old jealousies, the progress already made is almost more than could have been expected. In order to achieve this progress, however, compromises have had to be made and accepted and, because of this, I believe that the appropriate time has now arrived for another major advance in organization within the Department.

An examination of the chart showing the present administrative set-up indicates that the arrangement of responsibilities has several fundamental weaknesses:

(a) Each District Forester deals with eleven Chiefs of Divisions who may issue instructions to him on matters of Departmental policy.

(b) Regional Foresters are in an unnatural position in that they have few administrative duties and are often by-passed in correspondence between Chiefs of Divisions and District Foresters. Their positions should be clarified and either given more weight or abolished altogether.

(c) There are no Assistant Deputy Ministers, but Chiefs of Divisions function more or less in that capacity. The result is that the Deputy Minister is overloaded with petty administrative decisions to such an extent that he has little time for field visits or constructive thought.

(d) Chiefs of Divisions move in such a restricted orbit that they have little opportunity of acquiring the general knowledge of the Department necessary to qualify them for further advancement. The result is that, should it be necessary to select a new Deputy Minister, the logical choice must be from the field forces who, technically at least, are junior to and receive instructions from Chiefs of Divisions. Regional and District Foresters have to deal with practically all phases of Departmental administration.

(e) There is a tendency for each Division to become a watertight compartment. The effect of this individualism is indicated in some of the material appearing in annual reports. All Divisions supply material to the Operations and Personnel Division who arrange for the preparation of the report. Errors appear in it which should be detected if there were a more intimate chain of responsibility, as indicated on the administrative chart submitted herewith.

Turning now to the chart showing the recommended administrative set-up, it will be noted that, instead of seven regions, each with a Regional Forester, who is not an administrator, **I recommend three regions, each under an Assistant Deputy-Minister, who should conduct all negotiations concerning operations in his Region. His decisions, however, must be in conformity with the policy which emanates from Head Office.** Consultation between industry and government concerning operations, leases, sales, etc., most of which now take place in Head Office, would be conducted through the Regional Office.

Attention is drawn to the fact that a representative of the Air Service is allotted to the staff of the Regional Office. His function will be that of adviser on air matters to the Assistant Deputy who would be responsible for the administion of the Air Service in his region. The regional representative of the Air

Service would be appointed by the Chief of the Division of Air Services. The Air Service Chief would be considered a staff officer rather than an administrator, except for the supervision of winter-storage and the overhauling of aircraft.

Two Assistant Deputy-Ministers are recommended at Head Office, one to control those Divisions which deal mainly with forest operations and the other one for the remaining Divisions.

Division of Operations and Personnel

I have suggested a change from the confusing misnomer "Division of Operations and Personnel" to "Division of Administration and Personnel", or "Division of Office Management and Personnel". I also recommend that the Education and Publicity Section be removed from this Division and set up as a separate new Division.

Division of Education and Publicity

The possibilities of expanded activities in educational and publicity affairs, which are developed in a separate chapter, are so tremendous that their control should not be limited to the scope of a branch within a Division of the Department.

Marketing

I have also recommended a Marketing Division. This could serve as the co-ordinating agency in the sale of material from private lands and also could act as an adviser to hundreds of small mills regarding their output and its logical market. They could maintain statistics as to markets, price-trends, and world and domestic supplies. In depressed times their advice and co-ordinating powers could save many small operators from liquidation and the industry in general from the distress inherent in over-production during such periods.

As mentioned before, marketing advice and assistance to private-landowners might well be the agent which would bring the vast majority of that group to the realization of the value of their forests and thereby engender the urge to protect and perpetuate them.

Accounts and Law

I have placed the Divisions of Accounts and Law in positions reporting directly to the Deputy Minister. This gives them a status comparable to, but not the same as, Assistant Deputies. These two are service Divisions to all other Divisions and Deputies, and should not be under the direction of any executive below the Deputy Minister.

I recommend that all detailed accounting, all invoicing, collections, etc., be done in the Regional Offices, with Head Office dictating the policy and auditing regularly the work of the Regional Offices. District Offices would require cashiers only to receive monies for fish and game licenses and other small amounts, which would be forwarded to the Regional Office. This system would eliminate the major delays and errors inherent in the present system of over-centralization. It would also permit the Regional Assistant Deputy-Minister to know at all times how individual accounts stood, and would vest in him the knowledge and authority which Regional or District personnel now lack in dealing with operators. It is hoped that this would tend to end the practice of operators going to Head Office to seek favours or to consummate agreements about which the District personnel know little or nothing.

The Law Division needs no counterpart in the Regions or Districts and its function should be that of interpreting the laws pertaining to forests, preparation of leases, and day-to-day counsel concerning the problems of the Department.

It must be realized that an individual or corporation enters into negotiations involving leasing or otherwise obtaining timberlands flanked by the best legal counsel obtainable. It is the custom, privilege and right of counsel to obtain the best possible bargain for his client, accentuating those clauses that are favourable and endeavouring to soften or eliminate those that are unfavourable. **I therefore recommend that, in negotiating future agreements concerning timberlands, the Department also employ legal counsel comparable to that of the applicant.** The idea is not novel as many large corporations maintain a legal branch for routine matters and employ outside counsel in all major undertakings.

Air Service

A somewhat radical change in the functioning of the Air Service is recommended. I foresee the Chief of the Division functioning as a staff officer rather than as an operator, setting policy and allotting aircraft to Regions. His main operational functions should be those of the winter-storage and overhaul of aircraft at Sault Ste. Marie.

I recommend decentralization of field control of the Air Service, giving to the Assistant Deputy-Minister at Regional Headquarters control of the aircraft allotted to his Region. On the staff of the Regional Headquarters would be an officer nominated by the Chief of the Air Service Division, but under the control of the Regional Assistant Deputy-Minister. This air officer would act as adviser in all matters pertaining to the operation of aircraft in the Region and he could serve as liaison officer between the Division staff and the Regional Staff. This would be an admirable method of employing the services of pilots who are no longer able to meet the physical standards required to obtain licenses to operate aircraft.

If the control of aircraft were a function of the senior officer administering the Region, it would eliminate petty friction which is sometimes in evidence between Air Service and District staff and it might well eliminate some overlap in administrative costs.

No Other Fundamental Changes

I do not recommend any other fundamental changes in set-up in the other Divisions shown on the chart, but will touch on some details in the more explicit discussions of some of the Divisions later in the report.

I strongly recommend a re-organization along the lines indicated in the chart, as it provides a rational line of succession leading to the position of Deputy Minister and places Head Office personnel in the position of staff officers forming and advising on policy, but leaving the implementation of that policy to District personnel, who are the logical group to perform that task. Exasperating experiences involving District personnel and the people with whom they necessarily deal could thus be avoided. It would eliminate the feeling of isolation which exists amongst personnel in the Districts remote from Toronto. They are lucky if they see a Division Chief for a few hours once a year and several years may elapse between visits from a Deputy Minister. In the more distant regions there is a distinct impression in the minds of the public that a barrier exists between those regions and Head Office. They sense the limitations imposed on District and Regional personnel in dealing with day-to-day problems which could and should be left to the local staff for solution. This sense of neglect felt by the public and feeling of isolation in the minds of District personnel are very real.

The proposed changes in organization would do away with the present unnatural position of the Regional Forester who seems to be in a transition stage, with not enough administrative work or sufficient authority to justify his position. The situation cannot help but be confusing to most people who have to deal with District and Regional personnel.

Head Office personnel, notably in Timber Management and Accounts Divisions, now stagger under a load of administrative work. By being relieved of much of this detail, they would have time to visit the Districts regularly and to maintain personal contact with the men on the job, which is so vital to the success of any undertaking of this nature.

I would not be doing my duty if I proceeded to other subjects without focusing attention on the lack of assistants to Division Chiefs and key personnel generally. Assistants trained to take the place of their superiors are almost entirely lacking in the upper brackets of the Department. This is a most unhealthy condition which has been brought about by lack of funds and of suitable personnel at the salaries provided.

It is only because of a sense of duty and a love of their work that many members of the staff stay in their positions. At that, notable gaps have occurred in the service even in recent months, despite improved salary schedules. If the Service is to attract and maintain high-calibre personnel, it must be placed in a position to meet the competition of industry. Even the security generally supposed to be inherent in Civil Service appointments proved to be somewhat of a myth in 1934. The Department is only now beginning to recover from the blow dealt to it at that time. Men who live in fear of their positions work under a mental handicap which seriously impairs their efficiency. Unless we are willing to spend the money necessary to employ three or four times the present numbers of foresters and other technical personnel, including rangers, scalers, etc., forestry and the maintenance of forests in this Province will continue to deteriorate, because present staffs are totally inadequate for inspections and control. In a decade or two, forest industries will begin to shrink, with consequent distress to the communities concerned, loss of revenue and a general weakening of the economic fabric of the Province.

CHAPTER VIII

Legislation

There are scattered through the Statute books some twenty enactments dealing directly with the administration, protection and utilization of the Crown lands and forest resources of the Province. In addition, many other Statutes bear to a lesser extent upon forest operations, and a still further class relate directly or indirectly to the practice of forestry on municipal or private lands.

Many of the Statutes lay down general principles and leave the details of administration to be settled by Regulations made by the Lieutenant-Governor-in-Council. Such Regulations, when duly passed by Order-in-Council and published in the Ontario Gazette, have the force of law. Existing Regulations make up by themselves a considerable body of rules which are of prime importance to the operator.

This body of Statutory law has developed over a long period of years and bears obvious traces of hasty and often ill-considered tinkering. To find the laws by which his rights and obligations are prescribed, a forest operator must search through many volumes of Statutes and many issues of the Ontario Gazette, and having found the relevant Statutes and Regulations he will be perplexed by their lack of system or arrangement and by numerous ambiguities, inconsistencies and duplications.

I am heartily in accord with the suggestions made by many corporations, associations and individuals who have advocated a thorough revision of this whole body of Statutory law and Regulations. It would be a great convenience to forest operators, forest industries and the public generally to have those Acts which deal directly with forests and forestry matters consolidated into a single omnibus Statute, and to have other Acts dealing more indirectly with the same subject matter grouped together in the Statute book. The omnibus Statute to which I have referred might be divided into parts along the following lines:

PART I

A consolidation of Statutes which provide for the administration, protection and utilization of Crown lands and forests including such Acts as:

1. The Crown Timber Act, R.S.O., (1937) Ch. 36.
2. The Public Lands Act, R.S.O., (1937) Ch. 33.
3. The Forest Resources Regulation Act, R.S.O., (1937) Ch. 40.
4. The Forestry Act, R.S.O., (1937) Ch. 39.
5. The Cullers Act, R.S.O., (1937) Ch. 240.
6. The Mills Licensing Act, R.S.O., (1937) Ch. 37.
7. The Provincial Forests Act, R.S.O., (1937) Ch. 38.
8. The Provincial Parks Act, R.S.O. (1937) Ch. 94.
9. The Pulpwood Conservation Act, R.S.O., (1937) Ch. 41.
10. The Spruce Pulpwood Exportation Act, 4 Geo. VI, Ch. 27.
11. The Woodmen's Employment Act, R.S.O., (1937) Ch. 202.

PART II

A consolidation of Statutes dealing with forest protection including such Statutes as The Forest Fires Prevention Act, R.S.O., (1937) Ch. 325; The Railway Fire Charge Act, R.S.O., (1937) Ch. 326; The Fire Guardians Act, R.S.O., (1937) Ch. 327.

PART III

A consolidation of the Statutes dealing with the use of lakes and streams for logging purposes including The Lakes and Rivers Improvement Act, R.S.O., (1937) Ch. 45; The Bed of Navigable Waters Act, R.S.O., (1937) Ch. 44.

PART IV

A revision of the present Game and Fisheries Act, 10 Geo. VI, Ch. 33.

PART V

A consolidation of the laws relating to forestry on private and municipal lands including such Statutes as:

1. The Municipal Reforestation Act, R.S.O., (1937) Ch. 323.
2. The Settlers' Pulpwood Protection Act, R.S.O., (1937) Ch. 42.
3. The Private Forests Reserves Act, R.S.O., (1937) Ch. 324.
4. The Trees Conservation Act, 10 Geo. VI, Ch. 102.
5. The Nursery Stock Act, R.S.O., (1937) Ch. 43.

It is not feasible to include in a general Statute or collection of Statutes, such as mentioned above, every incidental reference in the Statute books to forestry matters; for example, The Mining Act, The Assessment Act and The Municipal Act all have sections of more or less importance relating to forestry or farm woodlots, but I do not suggest that the proper place for these long Statutes dealing mainly with other subject matters is in a collection of forestry and public-lands enactments. The consolidation which I have suggested might, however, contain a reference to particular sections of other general Statutes.

It need hardly be said that no revision or consolidation should be carried out until after careful study by the best legal talent available and after consultation with industry. Hasty or ill-considered action in this respect might well result in even greater confusion than now exists.

It is beyond the scope of this report to examine in detail the provisions of the Statutory law and Regulations now in force. It will be the task of legal experts to bring order out of the present confusion and to eliminate the uncertainties and inconsistencies which now exist. There are many points, however, upon which a definite policy will have to be formulated before the task of amendment and consolidation can be undertaken, and among these points I wish to call special attention to the following:

1. The obvious intention of The Crown Timber Act is to prohibit the export of unmanufactured wood. The power given to suspend the operation of the manufacturing conditions "for such periods as may seem proper and as to any district or districts which may be defined" is, in my judgment, intended merely as an exception to the dominant policy laid down by the Statute. The exception has now grown more important than the

rule, and if the present export policy is to be continued it should be clearly and explicitly authorized by the Statute itself.

2. Criticism of Ontario forest administration over a course of years has been founded mainly on the lack of a known and stable policy on essential points. Existing legislation confers on the Minister and on the Lieutenant-Governor-in-Council powers sufficiently wide to enable complete reversals of policy to be carried out without reference to the Legislature and without any notice to the public of what is being done. I am absolutely convinced that until the public generally, and those who are concerned in forest industries in particular, can feel confident that sound policies once adopted will not be abandoned to meet political exigences or at the whim of a Minister, there will be no satisfactory administration of our forest resources. I do not overlook the disadvantages inherent in too rigid a system, but I believe that, in the main, sound general policies once adopted should be embodied in Statutes where they are safe from interference without legislative action.

3. The Forest Resourses Regulation Act has aroused more critism and dissatisfaction on the part of limit holders than any other forestry law. It is attacked on the grounds that the power to interfere with contractual relationship can be exercised at the arbitrary discretion of the Minister of Lands and Forests, that such a power is a threat to secure tenure and that it will retard the application of management to forest lands.

   In view of the failure of existing contracts to give the Crown any right to reduce the size of limits which prove more than adequare for the needs of the limit holder, **I do not favour the repeal of the statute in toto, but would recommend amendments to ensure**

   (a) that the power to interfere with contractual rights could be exercised only after the court or some other independent body had found as a fact that the limits held by a lessee were more than sufficient for his needs;

   (b) that stumpage rates could be altered only in order to bring them into line with rates generally prevailing and not, as the Statute now provides, as a blanket penalty for bad forestry practices or improper dealings with labour.

   In my opinion, more attention has been focused on this Statute than its importance warrants. In this connection, the following points might be kept in mind:

   (a) Every agreement made since the enactment of the Statute in 1936 has been expressly made subject to *all* Statutes of the Ontario Legislature. In obtaining rights to cut timber on Crown lands, every operator since 1936 has, with his eyes open and knowing the obnoxious Act to be on the Statute book, chosen to go ahead.

   (b) The constant plea for security of tenure is greatly overdone· Nearly every operator in the Province has committed breaches of the terms of his agreement which would justify cancellation, not pursuant to the Statute, but pursuant to the contract itself. Fears for security of tenure have not had much weight in such cases.

(c) Other Provinces grant mere annual cutting rights and operators there appear to carry on without too much difficulty.

4. Section 23 (4) of The Forest Fires Prevention Act, which was added in 1946, provides that when fire originates in any particular area in which summer operations are carried on under permit, in the absence of evidence to the contrary, satisfactory to the Minister, the fire shall be presumed to have resulted from such operations and the operator shall bear the full cost of controlling and extinguishing the fire. This section is contrary to one's ideas of fair play and British justice and should be amended so as to throw the burden of proof on the Crown and to substitute the decision of the Courts for that of the Minister as to the sufficiency of evidence.

5. Provision should be made for the holding of an enquiry at the request of the District Forester, by properly qualified officials appointed therefor, immediately after a fire has occurred in order to determine responsibility while memories are fresh and witnesses available.

6. A great deal of confusion exists in respect of unopened-road allowances in Township Municipalities, especially in the less settled parts of the Province. **I recommend that this subject should be considered and that the law should be clarified.** It might be advisable to provide that municipalities should be required, within a limited time, to specify what road allowance they intend to make use of and that those not so specified should revert to the Crown.

7. Consideration should be given to incorporating into the Statutes many of the details which are now governed merely by Regulations. Many of the Regulations which have been in force over a long period of years have stood the test of time and have proved their usefulness. The inclusion of such Regulations in Statutes will assist in stabilizing forest policies.

8. **As has been recommended in an earlier chapter of this report, The Municipal Drainage Act and The Ditches and Water Courses Act should be amended immediately in order to curtail the detrimental effect of those Statutes upon woodlots and farmlands in the southern parts of the Province.**

When the work of revision and consolidation has been completed, I recommend that copies of the relevant Statutes and Regulations be made available to the public in loose-leaf form and that supplements covering annual amendments and additions be supplied.

CHAPTER IX

Timber Management

The Division of Timber Management keeps inventories of forest resources and deals with all timber applications, sales and licenses. Its functions also include the supervision of pulpwood exports, of working plans and of the arrangements for the scaling of wood and the inspection of cutting operations; in addition it maintains records in connection with cutting operations and pulpwood exports.

Its position as the source of advice to the administration on matters pertaining to the leasing of timberlands and the setting of rates for stumpage and ground rent, and its action in devising and implementing cutting regulations, makes it the most important Division dealing with Crown lands.

Because of these key functions it is almost inevitable that it should exert a tremendous influence in maintaining existing policy, or shaping new policy, following a change of government or even of Ministers. As a civil servant has few, if any, adequate means of preventing precipitate or unwise action by those in power, whether or not he agrees with such action, it is difficult to strike a proper balance now, concerning the responsibility for what has taken place over the years, as between successive governments and their civil service advisers.

Some of the transactions which have been carried out, particularly in Western Ontario, are difficult to explain or justify in the light of present-day knowledge. Vast areas of forest lands were leased, with the construction of a small mill included in the terms of the agreement. The size of the mill specified, when viewed in relation to the size of the area involved, suggests that speculation in standing timber was the real reason for many of the transactions. Few of the mills were ever built though the traffic in timberlands continued. A few years ago timberland, leased to companies with mills in operation, was withdrawn and re-allocated to a new company having only the project for a mill, without sufficient regard for the future of either the existing mills or the one proposed.

PRODUCTION OF SAWLOGS BY PULPWOOD OPERATORS

Practically all pulpwood agreements contain clauses providing that the Minister may direct that sawlogs shall be cut as such, but there is a bewildering variety in the form of these clauses as they appear in the different contracts. The practical result has been that few sawlogs have been produced on the basis outlined, although a couple of pulp and paper companies supply considerable quantities of logs to sawmill operators under private arrangements with the operators involved.

The futility of the sawlog clauses in existing agreements was well demonstrated during the 1942-43, and 1943-44 cutting seasons. Great Lakes Lumber and Shipping Limited, with little in the way of timber resources, was permitted and even encouraged to build a large sawmill in Fort William, during the early days of the war, in order to assist in meeting the critical needs for lumber.

On account of the existing woods-labour situation, coupled with the inherent reluctance of many pulpwood operators to deal with sawmill operators, the large new mill of Great Lakes Lumber and Shipping Limited received insufficient logs to operate to capacity.

The Minister of Lands and Forests attempted to supply the mill with logs by asserting his right to require the production of sawlogs by several pulp and paper companies operating in the Lakehead area and on the north shore of Lake Superior.

When each individual contract was studied it was found that no general formula or instructions could be applied to achieve the desired result. Under pressure from the Department, however, several companies produced a total of some hundreds of thousands of logs without any guarantee that they would be accepted by the prospective purchasers. They were not accepted and much argument ensued, with another Lakehead sawmill eventually purchasing most of them. A Royal Commission, set up to suggest a solution to the difficulties which had arisen, discovered the conditions to be as related above but finding that the problems presented involved enquiries far beyond the scope of the Commission then existing, they did not make any final report.

The major source of sawlog supply for the mill of Great Lakes Lumber and Shipping Limited is provided by two Orders-in-Council permitting this company to cut logs on pulpwood concessions.

Under an Order-in-Council dated 18th September, 1940, the Minister of Lands and Forests was empowered to enter into an agreement with the above mentioned company to cut spruce over 11 inches in diameter 18 inches above the ground and balsam on various limits as follows:

Abitibi Power and Paper Company Limited	435	square miles
Lake Sulphite Company Limited (now Brompton Pulp & Paper Company Limited)	205	" "
Nipigon Corporation Limited	90	" "

A subsequent Order-in-Council dated 28th April, 1941, similarly approves an agreement to cut large-size spruce, balsam, jack pine and poplar sawlog timber on the limits of the Pulpwood Supply Company Limited (Long Lac Concession, then comprising 2,616 square miles).

These Orders-in-Council are still in effect although Departmental permission to cut is at present confined to the first mentioned parcel, namely that of the Abitibi Power and Paper Company Limited.

Such arrangements are at best a makeshift and must be highly irksome to all concerned. The sawmill lacks assurance of continued supply and the pulp and paper companies involved cannot accurately estimate the effect that possible cutting programmes for sawlogs may have on their future sources of pulpwood supplies.

I am convinced, particularly in times when woods labour is scarce, that any effort to provide sawlogs under the terms in existing agreements will meet with similar inconclusive results and that the problem can best be solved by the application of the recommendations in the final chapter of this report.

The pictures on the next page and on page 44, indicating the presence of sawlogs on pulp and paper company limits and the use of these sawlogs as

Piles of eight-foot pulpwood containing much material suitable for sawlogs. (*Domestic company operation.*)

Pulpwood of sawlog size. Diameters may be judged by comparison with the hat. (*Domestic company operation.*)

pulpwood, are illustrations of a condition which I found to exist generally throughout the northern and western parts of the Province.

The question of sawlog production is not the only one which requires remedial action. There are many inconsistencies due to the infinite variation in provisions of licenses as well as agreements.

VARIOUS TYPES OF LICENSES AND AGREEMENTS

In addition to contracts resulting from the acceptance of offers for timber put up for sale by public tender and involving comparatively small areas, there are now in force some 51 so-called timber and pulp concession agreements. These agreements are for long terms, either 10 or 21 years, and usually with a right of renewal, and they deal with areas of considerable extent. They may be divided into three main classes:

(a) Agreements conferring the rights to cut sawlogs only.
(b) Agreements conferring the right to cut pulpwood only.
(c) Agreements conferring the right to cut all classes of timber.

The agreements conferring the right to cut pulpwood only and those conferring the right to cut all classes of timber may be further sub-divided into the following classes:

(i) Agreements requiring the operation of a domestic pulp and paper mill, with or without export privileges.
(ii) Agreements permitting the export of pulpwood but not requiring the operation of a domestic pulp or paper mill.

Agreements at present in existence have practically all been negotiated within the past 20 years, with a majority in the past ten years. Some of the present-day agreements are based on, or are renewals of, earlier agreements which were entered into in the early 1920's. The form in which the fundamental provisions are stated varies from year to year and there is a marked lack of uniformity in the case of agreements falling within the category of any one of the single classes mentioned above. One can only conclude that in respect to many important details, a general line of policy has never been adhered to, and that each individual contract is the result of a process of bargaining in which the interests of the Crown have not always been fully safeguarded.

Some agreements concerning sawlogs specify payment of stumpage on the basis of Doyle Rule, while others specify a rate per M feet board measure but do not mention Doyle Rule. The fact that the rule is mentioned in some agreements prevents its abolition merely by regulation, and necessitates a Statute to do so if such is desired.

Increased pulpwood exports permitted from Crown lands make it apparent that the Department has adopted the practice as a policy, but apart from the decision as to the general principles involved, there seems to have been little thought given to the terms and conditions under which the rights of export may be exercised. This is exemplified by the fact that some agreements (notably some of the later ones) require the building of a pulp mill in Ontario while others carry no obligation of this sort. The quantity permitted to be cut per acre per year varies very widely and in many cases grossly exceeds the annual growth under the cutting methods used. In other instances the agreement only covers the cutting of spruce and balsam pulpwood, thereby placing the cutting operations practically on a mining basis. In one agreement "pulpwood" is specified without mentioning the species.

It would probably be futile at this late date to attempt an allocation of responsibility for the diversity of terms in the various agreements. Provided that immediate action is taken to correct, simplify and standardize conditions so as to ameliorate the mistakes of the past and guard against those of the future, little purpose would be served in endeavouring to apportion blame.

There are several points about the agreements, some of minor importance but others of a more serious nature, which should be considered:

(1) Agreements involving the export of unprocessed pulpwood are all based on a clause in The Crown Timber Act which provides for such practice as an exception. The whole structure of the Act argues against the export of unprocessed wood; but agreements, involving many thousands of square miles of timberlands, have been executed for long-term periods based on the exception to the rule. This subject will be developed in Chapter XV on Export of Pulpwood.

(2) In nearly every case it is provided that the agreement shall be subject to all Acts of the Legislature, which are now or which may hereafter be in force, and all regulations duly made under the provisions of any such Acts, so far as they are of general application.

It is quite right to stress the fact that the Legislature has the power to change or nullify by Statute any or all agreements with the Crown. Operators should fully understand this fact and no term should be permitted in a contract which appears to limit the rights of the Legislature in this respect.

(3) In many cases, particularly in export contracts, the operator is required to cut a minimum number of cords each operating season and is permitted to cut up to a stated maximum. The same contracts require the concessionnaire to operate in accordance with good forestry practice, and to file a working plan providing a general scheme for the operation and management of the area so that it will be kept productive, all in accordance with The Pulpwood Conservation Act. These provisions appear to be quite inconsistent; the question will arise which is to prevail if the plan filed establishes the fact that, by practising good forestry the maximum, or even the minimum, cut cannot be allowed.

This difficulty could easily be avoided by making the paragraph which deals with quantities "subject always to the right of the Minister to restrict the cutting if, in his opinion, good forestry practice so requires."

(4) All operators are now required to file working plans. In some cases agreements expressly provide that, if the inventory reveals a shortage of wood, further areas will be made available; but no single contract permits the Minister, upon it being established that an operator has more timber than he requires, to decrease the acreage. In such a case, of course, the Crown is not left without remedy. It can exercise its powers under The Forest Resources Regulation Act; but it seems unfair that, while the operator may rely on his contract for the protection of his interests, the Government may be compelled to have recourse to an unpopular and much critized piece of legislation in order to protect the legitimate interests of the public.

(5) Provisions as to the duty of operators in making and filing operating plans have varied widely since they were first embodied in Concession Agreements. These provisions have been revised and greatly elaborated in some of the latest Agreements, but the utilization of the information included in the plans is not clearly stated. If, as I believe, it is intended to be used in operating the area in such a manner as to keep it productive in perpetuity, then this aim can be more clearly and simply stated.

(6) Provisions added in some of the newer agreements dealing with co-operation in the purchase of settlers' wood, state that all *bona fide* accounts due for settlers' pulpwood purchased by the operator shall constitute a first claim against the operator. I regard this clause as meaningless. The Crown surely cannot confer a prior right to the payment of one class of creditors as against other classes by an agreement to which none of the creditors is a party. The provision is misleading and might easily make settlers think that they have some protection against bad debts, whereas none is provided by this clause. It is possible that the Crown merely intends to authorize the company to give settlers' claims priority over its own.

(7) The amount of cash deposit varies widely and does not appear to be related to either the area of timberland involved or to the investment the operator has made in mills or improvements. The amount of deposit should bear a fixed relationship to the amount of the companies obligations in respect of annual dues and charges.

(8) The wording used in one agreement purports to permit the operator to continue the export of unprocessed pulpwood for the full term of the contract (till 1962) "notwithstanding any Statute which might be passed to the contrary". I contend that the clause is meaningless and does not bind the Crown. If, as was stated at the public hearings, the purpose of this clause was to make it easier for the company to arrange its financing in the United States, I regard its inclusion as highly improper.

DRAFTING OF AGREEMENTS

It is very strongly recommended that the policy of the Department in respect of such matters as the conditions under which export will be permitted, the production of sawlogs by pulp operators, the production of pulpwood by timber operators and the production of pulpwood for domestic mills, should be definitely determined and a standard, carefully prepared form of agreement adopted which would meet the requirements of every individual case. It is true that there are some details which obviously must vary with each agreement, but apart from these few, there are many matters of general application (or which should be of general application) to all operators, such as:

Right to use watercourses,
Deposit of security,
Payment of 20 per cent of the stumpage dues in advance each season,
Preparation of inventory,
Filing of working plans,
Purchase of settlers' wood,
Minister's consent to yearly operations,
Payment of ground rent and fire tax,
Measurement of pulpwood,

Qualifications as to purpose for which exported pulpwood shall be used,
Returns,
Right of inspection,
Pollution of streams,
Applicability of Statutes,
Pulpwood for domestic use,
Production of lumber by pulpwood operators,
Labour,
Default, etc.

All of these general matters should be omitted from the individual contracts and replaced by a single general provision that the contract shall in all respects be subject to the provisions of all Statutes now or hereafter in force and to all regulations made thereunder.

The advantages of such a course are almost too obvious for comment, but the following points may be briefly referred to:

(a) Great saving of time in drafting agreements and less possibility of mistakes;
(b) Encouragement for the formulation of a definite and fixed policy covering all details of operation;
(c) Facility in effecting a change of methods over the entire industry by regulation;
(d) Equal treatment of all operators.

A carefully worded agreement prepared in consultation with the best legal talent available would prove good protection, not only for the Departmental officers, but for the public as well. Such an agreement should not, however, be looked upon as a substitute for a firm and enlightened over-all forest policy.

ALLOCATION OF LIMITS

I consider the present allocation of Crown lands to limit holders to be illogical and uneconomic in many instances. Often there is little apparent relationship between the size and location of the limits and the location and capacity of the mills served by them. Some units of industry have more than enough resources to support them, while others cannot maintain their present production, still less increase it. The right is granted to export large quantities of pulpwood cut on limits which could properly support domestic industry, while more distant forests remain unharvested. Generally speaking, the pulp and paper group—both domestic users and exporters—is better served as regards limits than the domestic manufacturers of lumber, ties and poles. Most of these conditions are wasteful of the Province's resources and all are unsound from the long-term viewpoint.

It should be pointed out that manufacturers of lumber, ties and poles are themselves largely to blame for their present situation. When limits were available they did not undertake the obligations inherent in the leasing and holding of Crown lands, but for the most part chose to operate on a shoe-string basis, with the result that many of them must now subsist on material purchased from pulpwood concessions. Extensive areas of timberland are no longer available in proximity to most of the existing mills. Unless remedial measures are taken, many of the mills will disappear within the next decade or two.

Leasing of areas for single-purpose operations has been a long established practice but such operations create, and will continue to create, a tremendous waste of timber. Elimination of single-purpose logging operations should be given the very earliest consideration possible.

INSPECTION AND SCALING

The inspection of woods operations is most inadequate. This is due largely to lack of staff which, in turn, is the result of non-competitive wage schedules and working conditions. Top rates during 1946 for casual personnel employed as fire rangers, towermen, etc., was $4.00 per day, with the individual providing his own board. During the same season, sawmill workers were earning almost twice as much, pieceworkers on pulpwood operations were earning three times as much and many pieceworkers producing poles were earning four times that amount. It is therefore not difficult to imagine the problem the Department faced, both in obtaining new men and in retaining their staff.

The problem of obtaining new and suitable personnel is very real and must soon be solved, as the average age of scalers, rangers and towermen is now very high, the majority being past middle age. Recent efforts made by the Department to lower the average age and generally improve the efficiency of scalers and rangers is most commendable but it should be accelerated. Like all similar programmes, it will result in apparently increased expenditures, but the savings thereby made possible will reimburse the government many times over.

The Division has produced an excellent manual on scaling for the guidance of the field staff, and has promulgated many regulations dealing with most phases of woods operations. Unfortunately these have not been combined in a concise booklet and are not uniformly known or applied by all concerned. I have observed many instances of differences in methods or policy on the part of scalers in different districts and even in the same district. This would be inexcusable and probably would never occur if all regulations were consolidated into one booklet and copies were supplied to the Districts in numbers sufficient to distribute a copy to every party interested, including the operators. It would pay to do this, despite the expense and work entailed in frequent revisions.

I am firmly of the belief that the Air Service could be more widely used to good and economical effect in winter inspection and scaling operations and I have referred to the suggestion in Chapter XI on the Provincial Air Service.

STATUS OF SCALERS

The question of the status of scalers is one that I consider most important. A scaler working on an operation is normally dependent upon the foreman or jobber for housing and food. If he is unpopular with that individual because of his insistence on the observance of regulations, he may suffer, particularly in the matter of sleeping accommodation, and his stay in the locality can be made most unpleasant. **It is recommended that for the future, scalers be provided with private cabins and beds on all but minor operations, and that a ticket system should be instituted, whereby they can exchange a ticket for a meal in any camp, with the government reimbursing the operator at the end of each season for all meals supplied.**

In this manner, the scaler would be entirely independent of the operator and far more likely to scale and inspect in an unbiased manner. He should never be forced into the position of a suppliant to the operator for benefits of one sort or another. It is my contention that the status of scalers and inspection personnel generally should be raised, so that when they arrive on an operation they will be treated as men of consequence and therefore commanding respect. This is definitely not the condition now existing. The wearing of a distinctive uniform will do much to alter this. No doubt a few of them may, in the initial stages, be inclined to overestimate their own importance, but this tendency could easily be checked.

In questioning scalers in widely separated areas as to why certain wasteful practices were tolerated many of them stated they were afraid that, if they insisted on compliance with regulations, the influence of the operators would cause their removal to another locality at considerable cost and inconvenience to themselves and their families. I found no case in which such action had been taken and I do not believe there is any likelihood of it, but I have no doubt that some foremen and jobbers may have used the threat. I mention the matter because the fear undoubtedly exists in the minds of the scalers. It should be allayed.

TIMBER RETURNS AND ACCOUNTING

Varying clauses in agreements, as well as wide ranges in stumpage rates in hundreds of licenses, create a condition which places an unnecessary and exasperating load on the accounting personnel in District Offices. It takes months to carry out and check work which should require only days if conditions were standardized.

The following tabulation will serve to emphasize the above statement. Only a few species are included, but they illustrate the general condition.

Sawlog Stumpage Rates in Effect

White and red pine. .	89 rates varying from	$2.50	to $25.75	per M. f.b.m.
Spruce and balsam . .	82 rates varying from	2.00	to 13.50	per M. f.b.m.
Jack pine.	78 rates varying from	2.50	to 13.25	per M. f.b.m.

Pulpwood Stumpage Rates in Effect

Spruce.	49 rates varying from	$1.40	to $4.25	per cord
Balsam.	45 rates varying from	.70	to 3.00	per cord
Jack pine.	26 rates varying from	.40	to 2.75	per cord

DEFINITION OF A CORD

There is no standard "cord" recognized by the Government of Ontario for the assessment of stumpage, although a cord is defined by Act of Parliament. On woods operations on Crown lands, the cord may consist of any one of the following:

(a) Unbarked wood—4′ x 4′ x 8′ with an overlength tolerance of 2″ per stick, or roughly four per cent. The volume of a well piled cord of unbarked sticks of medium size will amount to about 88 cubic feet of solid wood+four per cent for overlength, or 88+3.5=91.5 cubic feet.

(b) Barked wood—4′ x 4′ x 8′ with no tolerance for overlength. On medium-size wood the removal of bark permits of more solid wood per cord to the extent of 14 per cent or 15 per cent. The volume of a well piled cord of barked sticks of medium size is therefore 88×1.14=100.3 cubic feet.

(c) Where longer logs are utilized for pulpwood and measured by cubic volume, stumpage is levied on the basis of 100 cubic feet=1 cord.

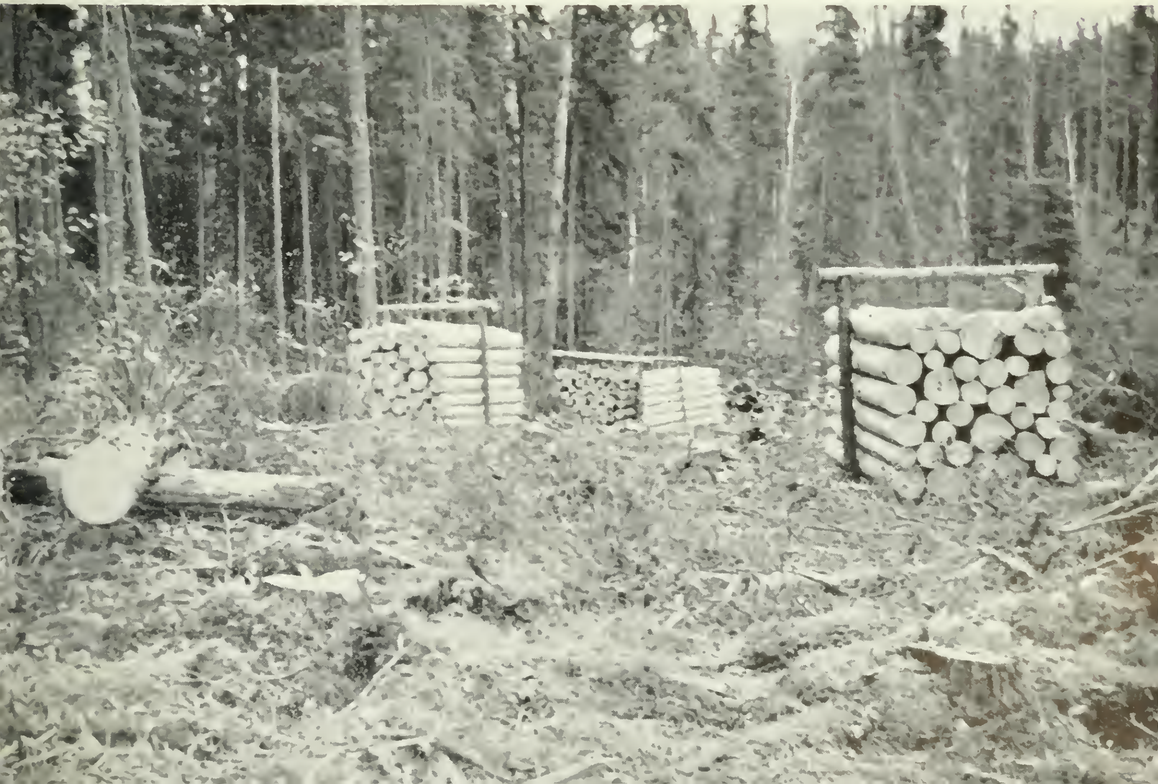
It should be emphasized here that, under the piecework system in this Province, the practice of barking pulpwood in the forest is extremely wasteful of raw material. Pieceworkers almost invariably leave all partially dry logs, or those with many knots, to rot on the ground because both are difficult to peel and therefore interfere with production and earnings. Such logs may usually be found concealed under brush heaps, although many are brazenly left in the open.

ANNUAL REPORT

The Annual Report of the Department of Lands and Forests should, I believe, be primarily concerned with keeping the public informed concerning their forest heritage. Many reports in the past couple of decades give the impression that they were prepared from material assembled in providing answers to questions of a Minister, rather than for the purpose of informing the public.

That for 1945 is a considerable improvement over its predecessors but the portion pertaining to timber management could be further improved by a consolidation of the total cut of each species with the total revenues received therefor. The revenues from material cut under permit are not shown, though in the aggregate they amount to a considerable sum.

Nine-inch dry spruce top wasted because it was difficult to peel. (Pulpwood-exporting company operation.)



I consider that the tabulations concerning small areas of timber sold or abandoned could be summarized, so as to show total areas for Districts with price ranges for these Districts, and the picture so revealed on one page would be more striking than that contained on the ten or more pages now used.

It does seem that something could be done to expedite the process of bringing information concerning a season's operations before the public. Information in the report for 1945, which has been circulated in April, 1947, deals with the timber-cut of 1943-44 harvested under wartime conditions. The timber agreements included were also signed in 1944. I suggest consideration of the possibility of having the period covered by the report different from that of the fiscal year. In New Brunswick all operations till October 31st in any year are included in their annual report which is issued to the public in the spring of the following year. In this manner, information is received before it is too late to take remedial action if such is necessary and, in addition, the report can be tabled at the session of the Legislature following the cut.

I recommend that study be given to ways and means of speeding up the preparation and issue of the annual report, as well as in re-arranging and consolidating tabular information so as to give the most complete picture possible from the information on hand.

MAPS AND STATISTICAL INFORMATION

A more comprehensive system of filing and tabulating data concerning licenses, agreements and information on wood exported would be of much benefit in the Division of Timber Management. The present system does not make information readily available, although it can usually be obtained eventually. The lack of over-all up-to-date maps retards the search for information, which is spread over dozens of small map-sheets and, in some instances, does not agree with the data provided in District offices. This, I believe, has been responsible for a couple of instances in which it was noted that similar rights were conferred on two companies for the same area.

I recommend an overhaul of the office administration and filing system in the Division of Timber Management.

CHAPTER X

Forest Protection

Most of the public think of forest protection in terms of fire prevention and fire fighting alone. In its studies, this Commission has adopted a more comprehensive viewpoint leading toward control of all destructive agents which threaten our forests, whether they be men, animals, insects, diseases or the elements.

CONTROL OF HUMAN BEINGS

Most chapters of this report deal with the elimination of the waste and loss which may be attributed to human agency. They may quickly be controlled and minimized by sensible regulations uniformly and, where necessary, rigorously enforced, and amended from time to time as research indicates such need.

Education as to the ownership of our forests, and the fundamental role they play in maintenance of our national prosperity and enjoyment, should eventually remove the need for many punitive regulations. Unfortunately some restrictive measures will always be required to protect the public from the greedy or thoughtless individual or corporation. Such measures will have to be accepted by those whose actions do not require them, as well as by the culprits who make them necessary.

CONTROL OF ANIMALS

It is not generally recognized that, though they derive little benefit from it, cattle grazing in the forests cause greater damage to the forests than any other action attributable to animals. The loss so caused on farm woodlots is tremendous and, as mentioned in Chapter VI on Private Lands, could be eliminated by fencing.

In my opinion, of the forest losses attributable to animals, the extent of the damage caused by porcupines is second only to that of grazing cattle. They remove very considerable areas of bark from trees, in many instances killing them by girdling, but in any event so weakening them that they are a prey to disease. During the past season I have seen tens of thousands of trees, mostly jack pine, so damaged and I would estimate that the total numbers affected throughout the Province must therefore amount to many millions. This constitutes a very serious loss and I have not been able to discover any specific compensating factor.

There is a widely held idea that porcupines are protected because they are one of the few animals a lost and hungry man can capture and kill easily. In many years of wide contact with woodsmen, hunters and forest travellers generally, I have never met nor heard of anyone who had, of necessity, caught and eaten a porcupine. I have been told of a few instances in which porcupine flesh has been eaten by humans, but in all cases it was curiosity rather than necessity which prompted the action.

Balsam and white spruce stand badly damaged by spruce budworm. Such timber should be salvaged immediately.

No legal protection for porcupines actually exists. In the Maritime Provinces there is a bounty for their destruction. However, as a result of the imagined protection in Ontario, the porcupine population has, I believe, increased beyond the needs of the biological balance of our forests. **I recommend that for a few years the killing of porcupines be encouraged and that research be carried on, in the meantime, to ascertain the minimum population needed.**

The extra protection afforded to beaver in recent years has apparently been effective in increasing their population and the results of the new colonies starting up are evident over widely scattered areas. In order to flood their lodges they dam small streams at strategic points, causing water to spread over considerable areas, which inevitably kills the trees on the areas so flooded.

A widespread survey of this damage, studied in conjunction with an analysis of any economic and other benefits resulting from the beaver population, is necessary before formulating a policy. It is possible that the beaver may be more valuable than the forests affected, but many thousands of acres, mainly of pulpwood forests, are involved.

CONTROL OF INSECTS

The ravages of forest insects are less spectacular than those of forest fires and, consequently, the losses attributable to them have never received the publicity justified by their magnitude. With the improved and efficient fire-protection methods now practised and their probable further improvement and extension, it is expected that losses from forest insects will, in the future, far exceed losses from fire.

The spruce budworm epidemic, now extremely serious in the Province, has already killed hundred of thousands of cords of balsam in widely scattered areas and threatens many millions of cords of balsam and white spruce throughout the province.

The present outbreak was first noticed in the areas adjacent to Sault Ste. Marie in 1936, but it has spread widely since that time. In addition to an extensive destruction of balsam in that region, the ravages are plainly seen over large areas between North Bay and Timagami, south of White Lake, southwest

A healthy young stand of mixed softwoods. Compare with the illustration on the opposite page.

and west of Lac Seul and in the neighbourhood of Lake Nipigon. This last mentioned outbreak is the most serious as the area covered is large and carries a very valuable stand of timber; in addition, the insect has seriously attacked and is killing white spruce as well as balsam. **Salvage of damaged timber, some already killed, some dying, is imperative and should not be delayed.**

There are minor areas of budworm-killed timber widely scattered but the areas specifically mentioned are those where virtually complete destruction of mature balsam has occurred over a large number, in some cases hundreds, of square miles.

Spraying with insecticides such as D.D.T., which is very costly, has not been completely successful in combatting the pest and results to date indicate that future action of this sort will only be justified in combatting incipient outbreaks when very intensive treatment can be repeatedly applied to a few square miles.

Possible control measures on a wide scale lie in the discovery of some virus disease which will kill the spruce budworm at some stage in its life-cycle, or in some fungus disease which will destroy it when in the dormant pupal stage. Vigorous research in these directions is already being conducted. Research in the possibility of control through some virus disease has been started in Europe, mainly in Germany, where an insect similar to our spruce budworm is held in check by some undiscovered influence, possibly disease. Studies of the possibilities of fungus attack are being made, at the Forest Insect Laboratory in Sault Ste. Marie, which are very promising.

It is doubtful if any economically feasible remedial measure will be developed in time to end the present epidemic before it subsides of natural causes. Such outbreaks occur at varying intervals and it is to be hoped that the entomological activity engendered by the present outbreak will culminate in knowledge which will enable us to stamp out coming epidemics while they are in their incipient stages. It is extremely probable that such knowledge will be obtained.

There is also a jack pine budworm active in the English River district, west of Lac Seul, with an incipient outbreak of the same insect southeast of Chapleau. The latter situation only developed in 1946 and it will be interesting to see whether or not it is possible to control it by spraying with insecticide.

It must be realized that all the native insect pests are always present in our forests. Fortunately these pests all have their parasites and predators which normally keep them under control. These pests, however, are not apparent to the ordinary person until such time as conditions extremely favourable to their propagation permit them to outstrip, temporarily, the breeding capabilities of their parasites. An epidemic condition then occurs which rages until the population of parasites and predators can build up numbers sufficient to restore nature's balance once more.

When foreign insect pests happen to find their way into our forests, possibly none of the native species of parasites will attack them and, in consequence, they may multiply unchecked and do tremendous damage before they are recognized and remedial measures are taken for their control. This was the case of the spruce sawfly in Eastern Canada and New England a few years ago. It was brought under control by a virus disease fortuitously imported from Europe with the insect parasites intended to prey on the sawfly. The larch sawfly, presumably of European origin, was accidentally introduced into Eastern America some time during the last quarter of the past century. It became epidemic in Canada in the early days of this century and raged unchecked for years, destroying virtually every mature larch (tamarac) tree from the Prairies to the Maritimes before it subsided, mainly because of lack of food. It is still with us, although parasites for it have developed over the years.

Other potentially dangerous insects which attack conifers and are known to be present in Ontario's forests include the:

Hemlock looper—A measuring-worm type of caterpillar which attacks balsam and hemlock.

Pine sawflies—Several species which attack pines are present in Ontario. Lecontés sawfly is one of these which is particularly destructive in red pine plantations.

White pine weevil—This native insect attacks white pines by laying eggs in notches cut in the leading or top shoot of young trees. The larvae, when hatched, eat downwards under the bark, killing the shoot. Several shoots may then attempt to dominate as the leader, but the weevil usually attacks them also with the result that, instead of a properly shaped tree, a worthless bushy shrub grows, with half a dozen or more shoots struggling to serve as the main stem. It is one of the chief deterrents to the successful growth of white pine over large portions of Ontario.

European pine-shoot moth—Not widely known but causes considerable damage in Scotch pine and jack pine plantations in the southern part of the Province. It attacks and destroys the leading shoot.

Eastern spruce bark beetle—The bark beetle usually attacks trees which are in a weakened or dying condition due to age or attack by other insect or fungi. Adult beetles lay their eggs in galleries tunneled under the bark of the host tree. The grubs which hatch from these eggs excavate individual mines under the bark. The thousands of small mines so formed quickly kill the already weakened tree.

Sawyer beetles—These beetles attack and seriously damage fire-killed standing timber and logs sawn and left in the forest throughout the summer. They are usually either black or grey and are distinguished by their long antennae. The grubs which hatch from eggs deposited in notches cut in the bark, bore long tunnels of about the same diameter as a lead pencil and a cone-shaped pile of borings may always be found below the mouth of the tunnel. Lumber sawn from logs affected is usually of extremely low grade, if not cull.

Insects detrimental to deciduous trees in Ontario include:

Striped maple worm—Defoliates maples and has been particularly active on Manitoulin Island, killing some of the stands affected.

Maple leaf cutter—Defoliates maple trees, causing a loss of vigour and a decreased sap-flow.

Tent caterpillar—This insect, familiar to almost every person, periodically defoliates extensive areas of poplar and attacks other trees also. Its parasites usually regain control of it without serious mortality to the host trees.

Bronze birch borer—Has not yet appeared in Ontario, but it is associated with serious mortality in birch stands in New Brunswick and Eastern Quebec and is a threat to similar stands in this Province. Whether it is a primary cause of tree mortality or attacks stands weakened by disease, has not yet been established but is under study.

When one speaks of insects as pests, one usually speaks of them in terms of human relationships and forgets that often man himself is the prime mover in calamities which befall the forests.

The best scientific evidence available indicates that many forest-insect problems are at least intensified, if not primarily caused, by not using, or making incomplete use of, certain tree species. Some trees are not removed by the operator of a limit for some reason or other, perhaps because they are less profitable than other species or will not float, or because the terms of the lease do not permit him to cut them. Nature's balance, established over decades and even centuries, is thus seriously disturbed and fertile breeding grounds are provided for the rapid multiplication of many destructive insects. It may be that the habitat of the parasite is destroyed, while the conditions favourable for the destructive insect are improved, in which case an epidemic is generated.

Proper silvicultural practices for maintaining a healthy forest with a fair biological balance have been successful in preventing serious insect ravages in European forests for more than a century, and there is every reason to hope that similar practices here will tremendously improve future possibilities. It will take many years of patient effort to achieve such a balance in Ontario, but the commencement of such effort should not be postponed.

There is little doubt that severe insect epidemics occurred in many regions before operations on any considerable scale were carried out. Silvicultural methods in any one Province will not protect it from insect infestations originating outside that Province, although it is a notable fact that healthy forests of proper age are rarely seriously damaged, even though attacked.

The preceding paragraph brings up the matter of the national and international nature of insect infestations and epidemics. They recognize no boundaries, interprovincial or international, and they must therefore be treated on the widest possible basis. This fact is recognized by all who have to deal intimately with the subject.

The Division of Forest Insects of the Entomological Branch, Department of Agriculture, at Ottawa, is the central body dealing with forest insects in Canada. It co-operates closely with the Provinces in conducting a survey of the incidence of insects of all sorts inhabiting our forests, and maintains central laboratories at Sault Ste. Marie (built by the Province of Ontario and staffed by the Federal Government) for intimate studies of the life history, habits and diseases of forest insects, and special measures which may be taken to control the various pests. The facilities of the Dominion Parasite Laboratory at Belleville are also available for the breeding and storage of parasites, and services of that nature. Laboratories to deal with local problems are maintained in British Columbia, Ontario and the Maritime Provinces. Only Quebec Province maintains a Forest Entomological Service, with its own laboratories, for its local problems. There is also close co-operation between the Quebec and Dominion Services.

The Forest Entomological Service was treated as a Cinderella until three years ago, when the seriousness of the budworm epidemic focused attention on its inability to cope with the problems which had arisen. Up to last year forest entomologists, who in addition to ordinary university status must also possess post-graduate degrees, were paid considerably less than the present earnings of most pieceworkers on Ontario woods operations. The result was a critical scarcity of technical personnel. Salary rates have now been adjusted so as to be reasonably attractive, and it is to be hoped that the difficulty in obtaining and holding technical staff has been mastered.

A national Forest Insects Control Board, with federal, provincial and industrial representation, serves as a co-ordinating agent. Giant strides are being taken in collecting and studying data for the purpose of preventing the destruction of forests by insects.

I recommend the closest possible integration and widest expansion of federal and provincial effort toward the solution of forest entomological problems. It goes without saying that such co-operative effort and exchange of information should be extended to interested organizations in the United States.

CONTROL OF PATHOLOGICAL CONDITIONS

Forest pathology deals with diseases of trees. We know little about the reasons why a species growing on one type of soil remains sound and healthy but on another soil develops red-heart and becomes defective comparatively early in life. We know equally little about rates of deterioration of logs or bolts under varying condition of storage, or other like matters.

Trees which have grown side by side since the sapling stage react differently to changed conditions; one dies, the other thrives. These and many similar questions are begging for solution. White pine blister-rust, a fungus disease which must have currant or gooseberry bushes to complete its life cycle, threatens the white pines of Eastern America. The only known method of defeating its ravages is to remove the currant bushes, a costly and tedious process. Intensive study should be devoted to a simpler and cheaper safeguard for this very valuable species.

The total number of forest pathologists in the employ of the federal and provincial governments in Canada has never exceeded a dozen, too few to cope with the diverse and complex problems of Canada's forests such as those mentioned above. I do not know of any receiving more than $300 per month, and the general average is much below that figure, despite the attainment of Master's and Doctor's degrees.

Like entomology, forest pathology is essentially a federal problem, but the provinces own 90 per cent or more of the forests and the pressure for accelerated activity in forest pathology must come from the citizens concerned. In case the argument may be put forward that, as the provinces own the forests and derive the revenue therefrom, the problem is essentially provincial, I point out that federal income taxes paid by forest industries alone amount to several times the revenues received by the provinces in the form of dues and provincial forest taxation generally.

CONTROL OF FOREST FIRES

What should be done to control forest fires in this Province was discussed for several decades before any realistic measures were taken to meet the challenge. Early action was practically all devoted to the suppression of fires rather than to their prevention. With the passage of years, technique and equipment have improved, as has also the statistical data concerning areas, locations, causes and costs of fires in effort and money. Fires over 500 acres in extent which have been reported and mapped in recent years are shown on Map No. 9.

One tremendous advance was made just after the First World War when the Ontario Air Service was founded. Ontario is unique amongst Canada's provinces in the distribution of water areas sufficiently large for the accommodation of pontoon-equipped aircraft, and in the absence of high mountains. Hills of medium height exist mainly along the north shore of Lake Superior and in the Algonquin Park region. Conditions are, therefore, ideal for using aircraft both for detection of fires and for moving men and supplies to fires quickly. This is a tremendous factor in fire fighting, as minutes saved in delivering men and equipment in the early stages of a fire can save hundreds of man-days later. Fires starting during the afternoon can usually be controlled and extinguished during the evening of the same day and the early morning of the next, when more favourable humidity conditions are likely to prevail.

As mentioned earlier, Mr. E. W. Basset of the British Columbia Forest Service accompanied the Commission staff from mid-May until late July, and in writing this chapter I have drawn largely from his report to me. His report is highly complimentary of the fire-protection personnel of the Department, an opinion with which I agree.

SELECTION OF PERSONNEL

The necessity for the selection of capable junior personel is stressed, as in the normal course of events they rise to senior positions. **I am convinced that educational standards for applicants must be set and maintained. Appointment should be on the basis of both written and oral examinations, supplemented by brief tests for mental alertness and aptitude.** Selection by such means would eliminate the employment of misfits and prevent waste and the loss of money and timber through costly mistakes later on. The days have passed when chances should be taken in appointing Rangers and Deputy Rangers. Relationship to somebody already in the service, or industrial or political pressure, should have no bearing in the selection of the guardians of our forests. Only men best suited for the work and who have in addition a desire to make it their vocation should receive consideration for posts which are likely to lead to permanent employment.

As mentioned on page 97, salaries and working conditions generally must reasonably reflect the conditions prevailing in industry or else it will be impossible to interest the proper type of personnel. **Once selected, they should be eligible for year-round employment with the normal civil service security, retirement benefits, etc., after an appropriate period as temporary employees.** The detrimental effect on morale, as well as the unfairness, of maintaining employees year after year as "continuous temporaries" is evident and the practice should be eliminated. In 1946 there were 448 continuous temporaries, many with terms of service ranging up to a quarter century or more. During the past year considerable progress has been made in eliminating injustices of this nature, but much more remains to be done.

The new Ranger School at Dorset, many years overdue, should make possible big improvements in the training of ranger personnel, compared with the former haphazard system of apprenticeship, where the interest taken by Chief Rangers and Rangers in training new men, and their ability to impart knowledge, varied widely and, in some instances, was entirely lacking. **Instructors should be selected from amongst the better administrators, but ability to instruct is of even higher importance than administrative ability. Training should be gradual, with frequent refresher courses to maintain interest and to keep the ranger personnel up-to-date.** It is realized, of course, that it will not be possible to obtain immediately all the personnel who are needed and who possess the desired standards of education, ability and alertness; also that training methods should necessarily be sufficiently flexible to provide for different types. **A start towards the selection of the highest type of young man available should be made forthwith.**

I caution against a tendency toward making the Ranger School an adjunct of the University, rather than of the Department of Lands and Forests. Its prime function should be and remain the training of scalers, inspectors, cruisers, etc., until such time as the recommendation I make concerning this matter in Chapter XIV is adopted.

ORGANIZATION

In Chapter VII, I have indicated what I believe to be a necessary and desirable change in organization and chain of responsibility, providing an Assistant Deputy Minister in charge of each Region, with District Foresters and an Air Service representative reporting directly to him. I consider the present alignment of duties between Regional and District Foresters to be insufficiently defined, wasteful of administrative material, and unproductive of the ultimate in co-ordinated effort.

Chief Rangers and other field staff should and must report directly to the District Forester, who should be provided with Assistant Foresters to whom he can delegate certain duties and one of whom can take his place when he goes on field trips. District Foresters, like many other administrative officers, have a tendency to become "desk-bound", particularly since the recent addition of Fish and Wildlife Division responsibilities. This tendency must be resisted and the District Forester should spend more than half his time in the field. **I recommend that in each District there should be at least three Assistant District Foresters, each in charge of a branch of the District activities.** District staff in charge of accounting and of fish-and-wildlife work would not necessarily be foresters.

The present field organization of Chief Rangers and Deputy Rangers is satisfactory, but their numbers should be increased as outlined under the next heading. There is at present a clash between duties relating to fire protection and the scaling and inspectional duties of Rangers and Deputy Rangers. This should be eliminated, as routine scaling or inspectional work must not be allowed to interfere with the efficiency of fire protection. Similarly "duties" in connection with guiding or other tourist activities, no matter how important the guest may be, should be carried out by personnel who are not connected with fire protection. **In other words, during the fire season, fire protection must come ahead of all other duties.**

I believe it would be beneficial to the service to exchange forest protection and forest inspection personnel between the various forest districts and ranger districts, from time to time. It would have a broadening effect that would ultimately prove very valuable to the service.

The proposal in Chapter VII, in which it is recommended that the Air Service in the region should be under the Assistant Deputy Minister in charge, will assist in welding the Forest Service and Air Service groups more closely together.

FIRE-CONTROL PLANNING

Some compromise must be made concerning the intensity of fire-control decided upon. It is, of course, neither feasible nor possible to prevent all fires, but it is possible to decide what measures are likely to prevent fires burning over more than a calculated percentage of any given area, even in a bad year. Having decided on the percentage, control measures toward that end may be formulated.

With such a wide range of forest types, topography and climatic conditions, fire-control planning must be tailored to fit the individual Districts. This can best be done by making the following basic surveys in each District or Region involved.

(1) Fire-History Study

The location and intensity of risk may be determined by means of plotting all fires and their causes over a given period, at least a decade. Trends must be checked to ensure that some transitory and non-recurring influence may not be overweighted.

(2) Fuel-Type Study

The extent and intensity of static fire-hazard should be mapped and evaluated in conjunction with the fire-history study above, so that tower locations and detection services generally may be planned to best advantage. Such studies may involve abandonment or relocation of existing towers.

(3) Access Survey

A map showing all roads, trails, boat-channels and aircraft-landing sites should be prepared in conjunction with item (2) above, to indicate less accessible spots where an excessive amount of time may be consumed in getting personnel and equipment to a fire. Further development may then be undertaken of those roads and trails indicated as being necessary. This survey will also be useful in arranging strategic location of seasonal personnel, equipment-caches, field headquarters, etc.

More imtimate and detailed studies of visibility from individual tower sites, locations for radio and telephone communications, tool-caches and ranger stations, must be superimposed on the above surveys

so that a proper balance of personnel and equipment, commensurate with needs, may at all times be maintained.

Fire-control plans developed as above should not be static. They will require constant alteration due to changes in fuel-types resulting from forest growth, cutting or other influences, such as shifting centres of population, changing modes of transportation, etc. For instance,

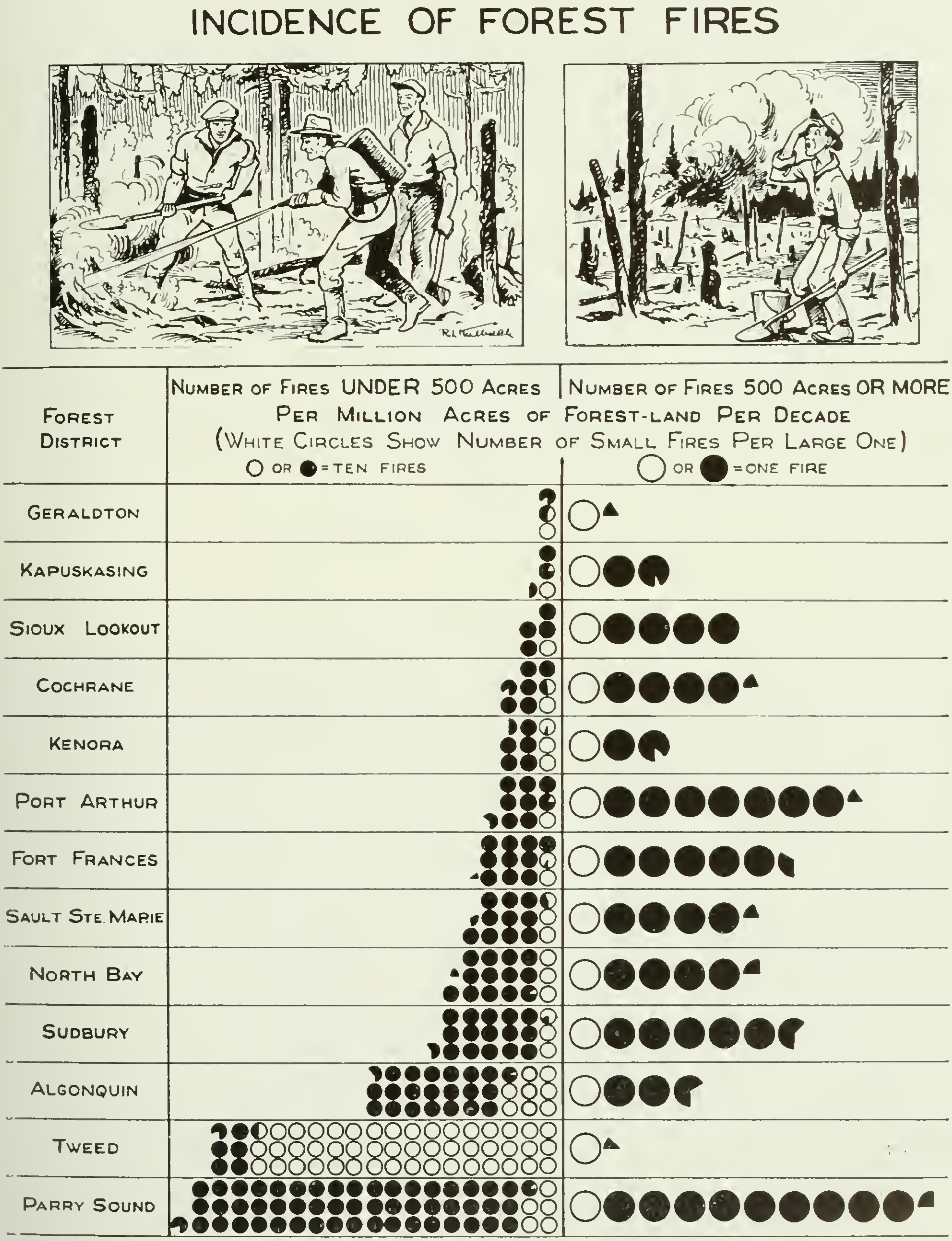


Chart showing the comparative incidence of large and small forest fires in the Forest Districts of Ontario.

the use of helicopters may radically alter the present system of detection and communications, eliminating many towers and telephone lines.

FIRE SUPPRESSION

Fire-suppression tactics and effort, wherever observed, were prompt and efficient. Within their limitations, only two out of all the Chief Ranger Divisions visited failed to function extremely well under the pressure of fire conditions and in those instances the performance was fair, not bad.

It is difficult to make a true comparison of the efficiency of fire fighting in the various Districts because of inherent differences in fire hazard existing between them. In the chart (p. 123) an attempt has been made to allow for these differences by reducing the statistics to a uniform basis of a million acres in each District for a period of ten years. Assuming equal efficiency of the personnel in the several Districts, the chart shows that proximity to settlement, with good roads and communication systems, permits of early detection and prompt control of fire as compared with conditions in remote Districts where means of communication and transportation are inadequate. It will be noted, for instance, that in the Tweed District of Southern Ontario there were 475 small fires for each fire which extended over 500 acres, while in the Sioux Lookout District, one out of every eleven fires exceeded that area. The fact that a larger number of people were in the woods and started far more fires in the Tweed District was offset many times over by the increased efficiency in handling fires in the early stages, made possible by quick detection and easy access to them with men and equipment. This is a convincing argument for more roads in our forests.

Spruce reproduction on an unburnt cut-over area. This illustration and the one on the opposite page are of adjoining areas separated only by a road which served as a fire-break.

nong the most disastrous of forest fires are those in cut-over areas even though no timber is destroyed. Such fires wipe out advance growth and so impede the reproduction of desirable species that the areas remain commercially unproductive for generations.

There are a few weaknesses in the fire-protection system to which I would draw attention and which are sufficiently serious to require mention.

(1) There was no communication provided between aircraft and ground crews on fires, except by direct contact, which was normally difficult to achieve as well as wateful of time. **Some radio contact, even of the "Walkie-talkie" type, by which the pilot could talk to the Ranger in charge, would often save hours in delivery of supplies and equipment to the site.** It would also permit the pilot to advise the ground crew of developments in the fire-spread, or possibilities of attack not readily apparent from the ground. Different wave lengths from those normally used may be necessary, but the possibilities well justify serious action toward implementing the proposal.

(2) **Suppressive action, in several areas noted, would be speeded by the building of access trails or roads.** The use of aircraft has a tendency to lull protection personnel into a sense of security which may not be justified in these areas. **Development of north-south highways in all the major watersheds would be a tremendous help in fire protection, as well as in implementing sound forestry practice.**

(3) The number of well trained personnel available were not sufficient to supervise the number of men involved on large fires. It requires one trained man for each five to seven fire-fighters scattered through the woods, if effort is not to be wasted and time lost. **Pre-season training schools, operated under District personnel who have taken the Ranger School course, would help. Every member of the District staff should have such instruction and it should be extended to selected individuals from the comapnies**

operating in the District; it should also be made available to the general public, particularly to those who might be called upon to assist in time of fire.

(4) The parachuting of supplies and equipment should be studied. It might require structural alterations to aircraft or even the adoption of other models, but it has distinct possibilities. **As soon as more practical models of helicopters are available at prices which are not fantastic compared with the service they can render, I recommend experimentation to determine their suitability for the twin objects of detection and the delivery of men and supplies to the scene of a fire.**

(5) **The adoption of a fire-danger rating system would, I believe, prove beneficial.** There are several good systems which might be used. One developed by the Dominion Forest Service is practicable and reliable. **I believe that adjustable signs made to resemble thermometers or barometers would be of very material benefit in making travellers conscious of the hazard. They would indicate the degree of the existing fire-hazard and should be strategically placed on roads in forest areas, giving at all times the correct information in a striking manner.**

EQUIPMENT

The fire-fighting equipment of the Department of Lands and Forests was found to be uniformly well maintained and in good repair. Tools and equipment were generally suitable for the service required, though in some cases they might be considered inadequate to meet the maximum emergency needs of the particular area served. Some lack of balance was noted in a few cases in that the Chief Ranger might be short of small and inexpensive equipment, while a rather expensive type of watercraft was available for water transportation when required. In at least one instance a fire within a couple of miles of Ranger Headquarters could not be reached by the forest personnel for several hours after it had been detected, because the only water transport available (canoe and outboard motor) could not be used in very rough water. **I recommend that all ranger stations be equipped with boats seaworthy for any weather which may be encountered on the body of water involved.**

There is a real need for central equipment warehouses where reserve pumping equipment, hose, outboard motors, etc., can be serviced and stored. One central warehouse in each of the three proposed Regions would probably suffice. It would reduce the over-all amount of equipment needed in the Province and would provide for quicker and better repairs in shops properly fitted and staffed for such service. The rapid and efficient distribution of extra equipment to areas where the emergency is greatest would also be facilitated.

The necessity for a serviceable, light-weight, pressure-type power pump is indicated for initial action on fires. Present equipment is good, but a pump of greater portability would prove extremely beneficial in the early hours or minutes of a fire. I recommend that, if suitable equipment is not already manufactured, the Research Division develop a pilot model for manufacture commercially.

The usefulness of bulldozers in developing fire guards is now recognized. **I am convinced that a couple of heavy machines and one light machine could be kept steadily in operation in each District during the summer**

months, developing fire guards, trails, etc. When a large fire develops, they would sometimes prove invaluable in quickly clearing a guard in the path of the fire.

Automotive equipment in practically all districts was old and generally in poor state of repair. Departmental mechanics observed working on vehicles had poor facilities and did not appear to be particularly well trained. **I recommend the study by the Department of the proposal that a well equipped and well staffed mobile repair shop visit the Districts periodically to overhaul their vehicles. It has possibilities of sound economy.**

In some Ranger Divisions, members of the administrative staff did not own cars and, as a result, the service suffered to some degree. It has been argued that Departmental cars lead to abuses but it may equally well be argued that allowances for privately owned cars on a mileage basis lead to similar abuses. If such abuse exists or is feared, then the supplying of suitably marked light delivery vans, instead of cars, for Chief Rangers and lower grades would seem to eliminate the problem. For senior personnel, Departmental cars seem to be justified and desirable. I repeat, the abuse of mileage allowances is just as feasible as the misuse of Departmental vehicles.

INSTALLATIONS AND FOREST IMPROVEMENTS

Existing field installations at Chief and Deputy Ranger headquarters are generally of a satisfactory type. There is, however, a need for an expanded building programme, particularly in the east and south of the protection area. The detail of such needs would entail an intimate study which would best be carried out in conjunction with the recommendations in the preceding paragraphs on fire-control planning.

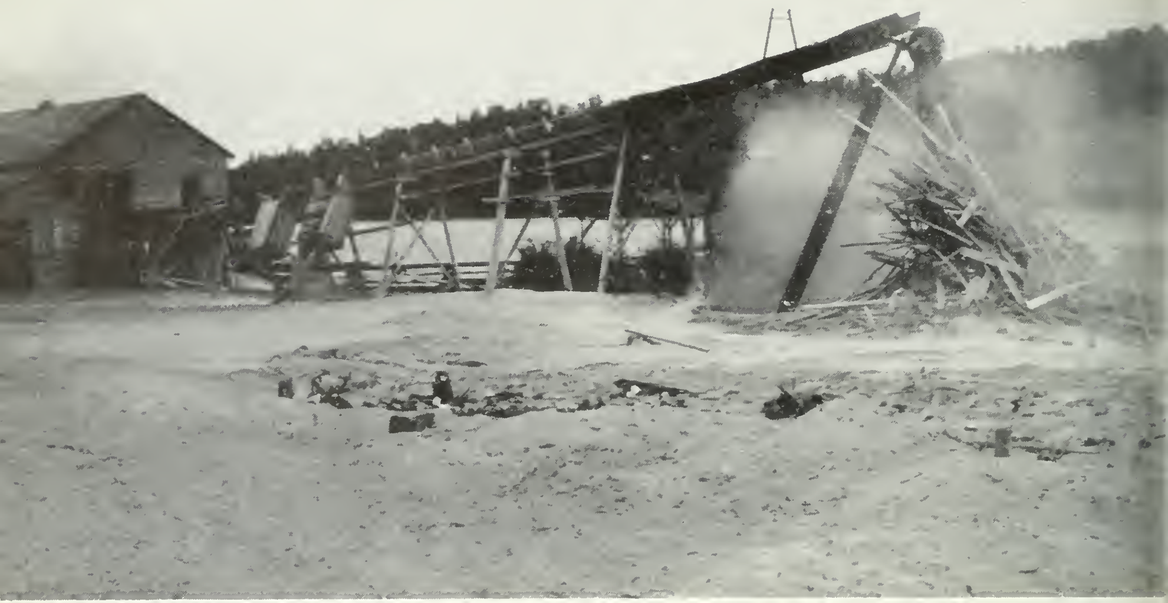
Regional and District headquarters are generally poorly served in matters of office accommodation and warehousing. Sault Ste. Marie, Geraldton, Kapuskasing and Pembroke are outstanding examples. From the standpoint of esprit de corps and efficiency, as well as Provincial prestige, **I recommend improved accommodation at most of the District Headquarters.**

Duplication of services is apparent between the District staffs and the Air Service in some areas. I believe the proposed set-up will tend toward more of the family feeling, and sentiments of envy or isolation will be dissipated.

Field telephone communications were not always adequate, or in good repair, although they gave evidence of having been well installed initially.

In a few instances, radio installations were inadequate, due to outmoded equipment. As an example, four lookout towers were keyed to a fifth tower, presumably all on the same frequency. In practice, due to age, it was not found possible to retain the sets on their exact frequency so that the key tower had to arrange time schedules for each of the others. As a result, a fire detected from a subsidiary tower just after its schedule, could not be reported for almost an hour.

The existing system of fire towers is measurably inadequate and there is a need for roughly 100 more towers in the area at present protected. These have been included in District recommendations for several years but have not been built for budgetary reasons. If protec-



An open refuse burner at a sawmill. These are common in the Hearst-Cochrane area and are a menace to the surrounding forest and evidence of poor utilization.

tion is to be as good as it can be, they are necessary and I recommend an expansion of the system in conformity with my remarks on fire-control planning.

In connection with field installations, it might not be inappropriate to mention that the method of budget allotments could be improved. Each District has construction plans of varying priority. The sum allotted to a District may not be sufficient to carry out a major scheme but it may be used for a minor project. **Therefore, if estimates must be cut, the Regional authority should be given the greatest freedom, within his area, to utilize the allotted funds for major projects, rather than have them dissipated on minor developments.**

FIRE PREVENTION

Some of the most effective fire-prevention effort that can be undertaken lies in the field of public relations. I am recommending elsewhere a Division of Publicity and Education and I foresee a widely enlarged field for it in providing lectures, motion pictures and radio programmes for schools, service clubs and the public generally. Publicity campaigns in the daily press and periodicals should be unremitting. I believe a fruitful public relations field might be cultivated by widely publicized invitations to travellers in our forest areas to visit lookout towers, ranger stations, air bases, etc., so that they may gain a wider understanding and interest in the work of the protection service. Such action by the Department in the case of an excellently maintained tower at Parry Sound has been the occasion of much favourable comment and interest.

The law regarding fire prevention specifies that areas surrounding logging camps shall be cleared of inflammable material for a radius of 300 feet and this has been widely observed in the case of most large permanent or semi-permanent camps. There are many notable exceptions in the case of smaller camps and temporary camps. I have seen summer logging camps with clearing debris within 20 feet, but with no spark arresters on smoke pipes and no fire-fighting equipment on the premises. **More specific regulations requiring a clearance around all camps, spark arresters, fire-fighting equipment to be maintained on site, etc., should be provided and fully enforced, the penalty being the closure of the camp unless deficiencies are corrected within 48 hours after notification.**

Hazards from cutting operations must be minimized. The period of hazard could be lessened by lopping limbs from the tops and spreading the brush so that it will lie close to the ground and disintegrate more rapidly then it does at present. Where summer cutting or other summer operations are carried on, there should be a fire pump with at least 2,000 feet of hose for each 50 men or fraction thereof on such operation, together with shovels, pails, mattocks, etc., all maintained in serviceable condition. All foremen and key men of the companies concerned should be required to take courses in the operation of such equipment and in fire fighting generally. Such courses could be given by District Ranger personnel prior to the fire season each year.

CLOSURE OF FORESTS IN TIME OF HAZARD

In periods of extreme hazard, at the discretion of the Regional executive, the forests should be closed to public travel. Such action would be wise and, in addition, would be good propaganda in making those affected more conscious of the importance and value of their forests. I believe such action would be cheerfully accepted and aided by all except those few who create the need for it.

A fire-danger rating system mentioned earlier would serve a most useful purpose if the closure recommendation is adopted. Indicators placed along roads could be graduated with markings and have a sign warning that if the hazard reached a certain graduation, travel would be prohibited. Closing of forests generally would create the need for some park areas being set aside to which tourists and others could be diverted during the period of restricted travel.

EXTENSION OF PROTECTION AREA

On the eastern side of the Province, fire protection services generally extend northward to the area where timber of economic value ceases. Moving westwards, however, there is a gap between the protected area and the economic timber-line which widens perceptibly until, in the more westerly portion of the Province, it extends over a distance of a couple of hundred miles.

Disastrous and repeated fires have removed the timber and much of the soil from vast areas within this unprotected timber zone. The lack of transportation systems will probably prevent utilization of much of the timber for many years, but the area holds vast potentialities as an extension of the Red Lake and Pickle Crow mining developments and many prospectors are already actively searching for minerals there. One mine is now operating in the Berens River district. Timber of a size suitable for mining and construction is growing on the unburned patches, northward to the Severn River and eastwards to include Trout Lake, Winisk and Attawapiskat Lakes. (See Map No. 7.)

When mining developments are active anywhere in this region, the available timber will be worth many times the value of similar timber to the south of it in regions having transportation systems. **I therefore recommend the extension of the protection area northward to the economic timber-line. This will require not less than two extra Chief Ranger establishments with air and radio coverage. The extension northward of existing Chief Ranger establishments to tie in with the new ones should also be provided for.**

FINANCE

Forest protection costs averaged slightly over $1,000,000 per year from 1941 to 1944 inclusive. The Air Service during the same period averaged slightly under $300,000 per annum. Both figures are based on statistics in departmental annual reports for the period, with allowance made for receipts. Although the Air Service does not function under the Division of Forest Protection, its existence is primarily for forest protection; its cost, therefore, should be allowed for in any consideration of the over-all cost of the Division. With post-war increases in wages and salaries and a necessary expansion in services, these costs can only increase, and for 1945 amounted to $319,000.

Annual recipts from fire tax have averaged less than $450,000 over the above-mentioned years, although an exceedingly high proportion of the expenditures are incurred on the areas held under license, agreement, permission or permit. It would be very difficult to get an exact breakdown of expenditures for fire protection applicable to those parts of the Crown domain so held. It is, however, apparent to any unbiased observer that the concentration and cost of protection service on these areas is much greater than on the areas not under some form of license or agreement. I estimate that upwards of two-thirds of all expenditures for fire protection and suppression are made in connection with the areas so held, yet the annual fire taxes on these areas bring in only roughly one-third of the costs. **I recommend that a definite breakdown of expense on leased and unleased lands be made, and that holders of licenses, agreements, permissions or permits, pay the full cost of the forest protection services rendered on the areas covered by their leases from the government.**

One fatal error which must be guarded against at all costs is a repetition of that made in the depression years when, as an economy measure, the detection and suppression staff was reduced below the minimum recommended by the Forest Protection Service. Fires, which should have been extinguished in incipient stages, got out of control and the cost of fighting them far exceeded the savings presumed to result from the wages of personnel dismissed; in addition, many square miles of timber were lost.

The cost of forest protection should be considered as the premium paid for insurance, with payments provided for just as carefully as are the payments on fire-insurance policies generally. Such premiums are not usually reduced as a measure of economy and, if reduced, can only result in increased losses when a fire does occur. A formula adopted by some forest protection experts is that the total of losses caused by fires plus the cost of fire protection should be a minimum, when averaged over a reasonable period (i.e., valuation of losses + cost of protection = minimum). In other words, increasing expenditures on protection are justified up to the point where they are no longer offset by reduced losses.

It is possible that reductions in cost might be achieved and efficiency increased by a closer co-ordination of government and industrial effort. **I recommend a serious study of the possibility of the government undertaking all detection work and possibly the communication services, with the companies responsible for all ground services (except possibly communications). This would fit into the scheme outlined in the last chapter of this report and would make forest protection a function of forest management, which it truly is. Idle or partially idle ground forces would be largely eliminated in low-hazard seasons, and company employees could be fitted into the fire-fighting picture more readily than at present. This latter item is important, as it was observed this season that pieceworkers earning high wages were reluctant and unsatisfactory workers when conscripted as fire fighters at approximately one-third the wages they were earning as pieceworkers.**

Suggestions made for the betterment of the forest protection service must not be construed as criticism. I believe that the Province is exceedingly well served by its protection service and that more could not reasonably be expected for the monies expended.

As a final word of caution, I would suggest that the tendency toward over-reliance on air service, at the expense of ground-force strength, must be carefully weighted in considering future development and expansion. Wars cannot be won without infantry to mop up and consolidate the gains of other arms. Few fires can be controlled without ground forces, who are the infantry of the forest service.

CHAPTER XI

Provincial Air Service

The Provincial Air Service is a separate Division from that of Forest Protection, although it might be argued that it should form a part of that Division because its primary function is for the detection and suppression of forest fires.

The Air Service, however, provides flights for the Divisions of Timber Management and Fish and Wildlife, sometimes for the Provincial Police or the Department of Health and, in areas where commercial air services are lacking, it has supplied transport for industry. A number of mercy flights are undertaken every year to carry critically ill or injured individuals to hospitals or for surgical services.

It commenced operations in 1924 and its headquarters has always been at Sault Ste. Marie, because the swift-flowing waters of the St. Mary's River furnish open water for aircraft returning to base after lakes may be frozen throughout all the northland. For the same reason, it permits the assembling and testing of aircraft early in the spring so that they are ready to proceed to their destinations as soon as there is open water in the northern lakes. All winter-storage and annual repairs and overhaul work are carried out at Sault Ste. Marie.

In 1946, the service consisted of 29 aircraft, 22 of which cannot be considered modern. The fleet is now composed as follows:

12	Norsemen
9	Stinsons
1	Canso
5	Moths
1	Fairchild "71"
1	Buhl

Of these (20 of which are equipped with two-way radio), 27 were on fire-fighting service, with the Canso mainly used for exploration and insect-control experiments. The Buhl is utilized in the sulphur-fume investigation in the Sudbury area.

The Norsemen aircraft are extremely sturdy and reliable and well adapted to the service required of them. From the experience to date, I am convinced that a wise choice has been made. There does, however, seem to be a field for a cheaper aircraft with corresponding lift to provide facilities for parachuting supplies and equipment to fire fighters. Such an aircraft has not yet appeared. Speed is not the governing factor in fire detection and fighting. A difference of a few miles per hour is not of great import on a large majority of the flights undertaken.

One of the drawbacks of the Air Service is that it has, as yet, no reserve of aircraft and when one is out of service for repairs, there is no machine available to take its place. In such instances, coverage is normally provided, at least in part, from air bases in adjoining Districts.

I believe that a wider use of aircraft on winter administration and inspection of operations would be profitable and would measurably assist in bridging the gap between staff available and staff needed. The Chief of the Division points out, however, that aircraft so used would not be available for proper overhaul before the summer's work starts and, in addition, flying hazards are somewhat higher in winter than in summer. An aircraft lost on winter operations would therefore leave a corresponding blank in forest protection the following season and it is essential that fire protection should receive priority.

I recommend, therefore, that the fleet be built up to a point which will permit of a surplus available for proper rotation for repairs. This would remove the present objection to winter flying which would be beneficial, not only for timber management, but also in the control of poaching activities.

Due largely to the nature of government accounting practices which deal with cash transactions rather than expenses, the comparative costs of operating the different types of aircraft have not been computed, or for that matter, the the cost of operating any aircraft. The paying out of money for purchases of new equipment in any year is not necessarily an expense in that year and, conversely, an expense such as depreciation may be incurred without paying out any money. As a result, the accouts for any particular year are not necessarily a reflection of the actual cost of the year's operations. This is not a critism of the Division of Accounting, who are giving accurate reports of the expenditures and receipts of the Air Services as required by the system of accounting in effect. **It does however, point to the need of a more comprehensive system of cost accounting within the service.**

In 22 years the service has operated ten different types of aircraft, and a wealth of valuable data could have been made available had a cost system been in effect similar to that used by commercial air transportation companies. However, the net expenditures for the service distributed against the various air bases has been the type of information required and supplied.

In the past, aircraft have been completely written off in four years, although some of the Moth machines are now sixteen years old and ten years would seem to be a conservative period on which to base depreciation charges. Tax is paid on all gasoline used and the Department of Highways received revenue amounting to over $10,000 per annum from this source for 1945 and 1946, which amounted to more than $1.25 per hour flown during the period. Commercial aviation companies do not pay tax on gasoline used in aeroplanes.

As there are no figures available which will give the operating costs per hour of any type of aircraft used, comparisons with similar costs for aircraft used commercially cannot be made. However, an analysis of accounts 1944/45/46 indicates the average stand-by cost per aircraft, including all types except the Canso, as amounting to $53.03 per day. This includes all charges except those for gas, oil, etc., which show annual costs increasing from $5.23 per hour in 1944 to $6.93 per hour in 1946, due partly to an increase in the number of heavier aircraft. Naturally, there is a wide difference between average costs and individual costs, as the heavier Norseman, with many times the weight and power of the Moth, uses more fuel per hour of flying time.

Reasonably accurate cost figures should be developed for the various types of aircraft so that proper charges may be made to other Depart-

ments of the Government or to commercial firms who use the service from time to time, and also to meet the criticism sometimes expressed that the Department could purchase flying services more cheaply than they can provide it themselves.

It would be erroneous to make a straight comparison of hourly charges of commercial air services and hourly charges for the Provincial Service aircraft. The value of having suitable aircraft, properly distributed, instantly available and under Provincial control, is a dominating consideration which must not be overlooked. This factor may be regarded as insurance without which our forests would be in a more precarious state than at present. A published commercial rate per hour for flying does not mean that there will be an aircraft available at the right place whenever called upon for either detection or suppression service.

A minor matter of economy would appear to require study. I noted special flights made to deliver mail and groceries to towermen. The cost per pound of delivering groceries in this manner seemed to be out of proportion to the services rendered. It may be that I have failed to perceive sound reasons for the action, which is not confined to isolated cases; but I suggest the serious consideration of land or water delivery of mail and groceries to isolated posts. Naturally, it is sound economy to deliver such material on regular flights and no criticism is directed against such action.

As mentioned in Chapter X, I recommend experimentation with helicopters as soon as their performance and cost justify such action. I believe there is a real field for their use in delivery of men, equipment and supplies, from the point where pontoon-equipped aircraft can deliver them, to the site of the fire. Their possibilities in detection activity may also justify their widespread use.

At all times during the five months in which the Commission staff made wide use of the Air Service, there was not a moment's delay because of unserviceable aircraft. Pilots were invariably obliging and efficient and, on every flight, reached their desired destination. This is a record of which any service might be justly proud.

In Chapter X on Forest Protection, I warn against a possible tendency to rely too fully on aircraft. Their field lies in detection and quick delivery of men and supplies to the vicinity of a fire. If aircraft cannot put down in an area, then there must be trails and other land communication systems provided for ground forces. Such areas exist and I caution against the possibility that they may not receive the attention they deserve because of over-reliance on aircraft.

I have also recommended that aircraft in the various Regions suggested should be under the control of the Assistant Deputy Minister in charge of the Region, who would have a representative of the Air Service as a member of his staff.

CHAPTER XII

Fish and Wildlife

The Division of Fish and Wildlife was transferred to the Department of Lands and Forests only during the past year. I believe that the transfer was a wise one because many phases of the work of the new Division may be coordinated with the work of the Department without serious dislocation or large additions to staff. In some areas it has thrown a considerable administrative load on the District Foresters and has, to some extent, interfered with their field work amongst, and personal contacts with, forest operators and owners. Clerical staff could be added to District Offices to handle office routine, thus releasing District Foresters and technical personnel generally to function in their proper sphere.

Testimony given at the public hearings indicates a tremendous lack of fundamental data concerning populations of the various species of birds, fish, and animals and the causes of their migrations and serious epidemics amongst them, or other reasons for the diminution in their numbers.

It is certain that many of the streams in Southern Ontario which are not now inhabited by any type of useful fish, once teemed with game fish of various kinds, including the land-locked salmon. Stream pollution and extreme changes in water level have been largely responsible for this condition and, in many cases, spawning beds have either dried up in the summer or have silted over because of erosion, on the higher stretches of the steam, occasioned by freshets; also the removal of timber has allowed water temperatures to rise to points which game fish will not tolerate. A return of good fishing on our many streams would not be the least of the blessings conferred by a wide scheme of reforestation and restocking. Not only would fish then reappear, but game birds would return. The addition of fish and game birds would add to the recreational value of the countryside and make a worthwhile addition to the larders of those who have the opportunity to fish and hunt.

The reduction of forests to less than 10 per cent of the total area of Southern Ontario has seriously affected both bird life and fish life and it is most unlikely that there will be any considerable improvement until the area of forest is increased on a vast scale. There will not be a satisfactory balance until 25 per cent or more of the land is again under forest growth.

Big game in Ontario consists of the black bear, white-tailed deer, moose and caribou.

Black Bear

Black bears are still abundant, even to the point of being a nuisance.

Deer

Deer are abundant in many regions and, although conflicting evidence was presented before the Commission, the testimony of scientists who had given the subject most study left little cause for worry concerning the deer population. Local scarcity was reported but this seemed to be the result of over activity on the part of hunters in these immediate localities.

There were 55,000 deer licenses issued last season in Ontario—a tremendous increase which may necessitate remedial action if it continues to grow. Evidence given by a member of the Ontario Federation of Anglers and Hunters blamed outfitters for the local disappearance of game in certain areas. His contention was that such areas could not support forty or fifty new hunters within a small radius every week or ten days during the open season.

Deer have proven that they can live and multiply close to or within settled areas. Beyond the possibility that their numbers may be seriously depleted by slaughter on a large scale by too many hunters, their future seems reasonably well assured.

Arguments were presented for and against the passing of a "buck law", which would for a time prevent the shooting of any deer except bucks over one year old. The need for such action is not clear, though it would be a conservation measure of very considerable importance because many hunters would never get a deer if they had to be close enough to it to establish beyond doubt whether or not it had antlers. It was argued that many does would be shot and the carcasses left concealed in the woods when the sex was established and the legal implications realized. It was also argued that the proper biological balance would be upset with a consequent harmful effect on the health of the deer population.

It was argued, I believe with some justification, that deer should be killed in reasonable numbers in order to prevent an expansion of population beyond the capacity of supporting feeding areas. Where numbers increase beyond the carrying capacity of any region, disease and a decrease in the average size of animals may be expected, in addition to damage to forest growth.

The matter of suitable feed and feeding areas has not been very intimately studied and conflicting views are held. It is rather apparent that many deer die in yarding areas late in the season, possibly from starvation occasioned by the disappearance of browse. What percentage of deaths occurring in this manner is amongst the mature specimens, which would normally die of natural causes, has not been established, nor has it been established whether it is lack of initiative or lack of ability to travel through deep snow in their weakened condition that prevents migration to other feeding areas. The summer feeding of deer presents no problem. The destruction of winter-feeding grounds by fire or unwise exploitation may seriously affect the situation in any locality. One scientist gave the following testimony: "The best possible environment for deer is provided by forests that are well utilized for wood, where slashings are common and young stands well interspersed . . . the production of a crop of white-tailed deer in Ontario is an easy matter. The control and supervision of the large and increasing number of hunters is the biggest problem in deer management."

The use of hounds in hunting was condemned by one group and defended by another, with mention by one witness of humans who imitate dogs and follow the trails "giving tongue" in a locality where hounds are prohibited—a practice which gives promise of the development of a new seasonal forest industry. The evidence presented is far from conclusive. Prohibiting the use of hounds would certainly reduce the chances of older and less mobile huntsmen shooting their deer. I am not venturing to express an opinion concerning the cruelty to the deer. Some compromise measure, such as hunting with a different type of dog which would desist after a 15- or 20-minute run, would seem to hold possibilities.

There are several abuses of the present game license procedure which could be corrected comparatively easily, thereby diminishing the drain on deer in some of the areas which are intensively utilized for hunting. "Dated" licenses, expiring in a given time, would prevent the use, in more southerly localities, of licenses purchased for the northern localities where the season opens earlier.

The widely practised custom whereby a guide shoots deer for any or all of the members of a hunting party should be abolished forthwith. This could quickly be accomplished by printing one section of the license in the form of an affidavit on which the holder of the license would swear that he shot the animal to which the affidavit must be attached. Violation should render the signer liable for perjury and, in the case of a guide, to confiscation of his license without right of renewal for a period of three or more years.

The above suggestion would prevent the practice of the best shot in a hunting party shooting the deer for those not so skillful. There is really little reason why the possession of a deer license should entitle any citizen to receive a deer, whether or not he has the skill to shoot one himself. Under the circumstances this custom, which practically assures a license holder a deer, makes venison a very cheap source of meat and, in my opinion, is one of the main reasons for the tremendous increase in the number of licenses issued. If it becomes necessary to reduce the deer population, they might be slaughtered commercially and the venison sold to the public, as is the case when buffalo herds in Western Canada are reduced. By this means, the opportunity of obtaining venison would be much wider than is now the case.

It was generally agreed that no shooting should be done on, or within 100 yards of, any Provincial or county highway.

The issuance of a license to an individual should obligate him to fill in a section, which would be returned to the Department, giving the date and place where a deer was shot and its sex, age, weight, condition, etc. Statistics of this sort would be of great value to the scientists studying game problems.

Much waste of venison could be eliminated if a pamphlet were prepared and distributed with each license, giving instructions on the preparation, care and handling of a deer carcass after the kill.

Representations were made that guides' licenses have been issued to unsuitable and untrained individuals, sometimes known to be poachers. It would seem that an applicant should be vouched for by some official or a game association with knowledge of the applicant's background, and unlikely to recommend unsuitable ones. Possibly the applicant should be required to pass an oral or written examination.

Moose

For a number of years, moose have been decreasing in numbers throughout Eastern North America and Ontario has suffered with the other regions. The reasons underlying the diminution in moose population are not yet understood, but it is certain that hunting them is only one of the contributing factors and probably not the main one. Research as to the cause should be seriously pursued and remedial measures developed at the earliest possible date if this species, so enticing to hunters, is to hold its place in drawing tourists to Ontario. It is not necessarily because of advancing settlements and commercial enterprises that moose are disappearing. Experience with closely related species in Scandinavian countries and Finland indicate that they do not need primeval conditions to survive.

There is no question, however, that moose are much scarcer than they were in some of the areas in which I worked on surveys prior to 1914, and which were visited by the Commission this year. The relative influences of shooting, timber exploitation, disease, etc., in reducing the moose population are quite unknown but should be exhaustively studied in order to produce a solution to the problem.

Caribou

Caribou were once numerous westward from Lake Nipissing and northward practically to the timber line. Their partial disappearance has been much better understood and appreciated than in the case of moose. For winter food, caribou depend almost entirely on reindeer lichens which, after fire, take about 50 years to develop. A glance at Map No. 9 which outlines only those fires reported and mapped in recent years, shows how much of the caribou habitat has been rendered unfit for their maintenance. Fortunately a good nucleus for an increased population remains and, provided the species is given a chance, there is every hope that improved fire-protection will permit it to regain its place as an important game animal in this Province.

Partridge

Partridge, or grouse, of one kind or another are native to this Province. Although at present they are experiencing one of their intermittent "low" periods, which is of a particularly pronounced nature, they will no doubt again furnish good sport across the Province. It should be noted that the scarcity of these birds is just as pronounced in areas where shooting is not a factor as as in those areas close to settlements where scarcity is generally attributed to slaughter by sportsmen. At no point in the timbered portion of the Province did the Commission find any indication of an abundance of partridge.

Pheasants

Pheasants have been introduced in several areas and have proved that with winter feeding they can survive. They do not seem to be able to maintain their numbers without artificial aids and whether their propagation should be encouraged by the Division of Fish and Wildlife or whether this should be left to private groups is a matter for debate. My personsl impression is that studies toward finding and removing the cause of "low" periods in the native game-bird population offer wider possibilities in the provision of sport and recreation as well as of food.

Wild Ducks and Wild Geese

Wild ducks are native to most of the lakes in Northern Ontario and wild geese use the northern Barren Lands as a nesting ground. Duck hunting is one of the most widely practised sports and, during the open season, extends over practically all the lakes and marshes in the southern portions of the Province. Although statements are sometimes noted in the press expressing alarm about the future of wild ducks, no evidence was offered to the Commission indicating any concern on this score.

Wild geese are more difficult and more expensive to reach. Unless one can afford to go north and shoot them before they migrate, the opportunities of shooting them are not extensive.

Fish

In areas where hydro developments or any dams for stream-control have raised water to such an extent that spawning conditions have been seriously altered, the fish population seems to have suffered rather severely. Silting and water discoloration have resulted in Lake Nipigon due to the Ogoki Diversion and in the Seine River area due to the Steep Rock development, and I am alarmed about the effect this will have on the fish. It is possible, however, that economic considerations will overshadow the harm done to the fish.

Ontario is studded with beautiful lakes, practically all of which might be developed into outstanding recreational assets. A broad programme of road development to open up all major watersheds and which would make these lakes accessible and thereby relieve the drain on lakes closer to population centres, coupled with a programme of improved fishing conditions, promises sound economic possibilities. It is a well established fact that, within reasonable limits, science can assure a crop in pounds of fish per acre of lake in much the same manner that it can assure a crop in bushels per acre of farm, or cubic feet of wood per acre of forest. It is possible that we have pursued just as thoughtless a course of exploitation of our fish resources as we have of our forest resources; but the restoration of our fish resources will require a much shorter time, except in those streams and lakes which require reforestation to return them to their original, natural condition. It should be initiated on a soundly planned basis, starting in the localities closest to roads and railways.

I recommend:

(1) "Dated" licenses, possibly of different colours, identified with areas which have different periods of open season for the same species.

(2) The rigid enforcement of a regulation that one license permits the shooting of only one deer or moose.

(3) The enforcement of a regulation that guides or others may shoot only one deer and that each license will carry one detachable affidavit form which must be signed by the holder, testifying that he personally shot the animal to which it must be attached.

(4) That provisions be made on licenses for a "written" statement of game taken, including the locality and other pertinent information.

(5) Research as to the causes of the gradual disappearance of moose; the effect of stream pollution on fish; water levels and flow; the feeding habits of deer and moose; the variations in bird populations and the reasons therefor; the effect of birds in controlling

forest insects, etc. There are dozens of similar problems requiring solution.

(6) The establishment of temporary game sanctuaries. When game becomes scarce in any locality, it might well be declared a sanctuary for a period of five or ten years, then opened to hunting again.

(7) The setting aside of a couple of townships devoted exclusively to the more primitive method of hunting with bows and arrows, etc. It would appear that this form of sport calls for the maximum of hunting skill, without causing as serious a depletion of game as firearms. It is definitely possible to kill deer with arrows, and it would seem of little consequence to the deer whether the missile was discharged from a bow or a rifle.

(8) The development of better fishing conditions for game fish in our more widely advertised areas. While working in the neighbourhood of Lake Nipigon last summer, I met no tourists who had taken a satisfactory catch of fish; but I did meet several who were irate because they had come a long way to fish in the widely advertised Nipigon waters, and returned empty handed except for a few pike. It is possible that other regions may impress outside fishermen in a similar manner. A few such disgruntled tourists describing their experiences may seriously endanger a growing industry.

(9) That the Division of Fish and Wildlife attempt to establish the needs, if any, for a proper biological balance of porcupines and that, in the meantime, huntsmen and others declare a relentless war on these forest destroyers. Although porcupines are not game animals, they are often encountered by huntsmen and opportunities for their destruction are many. One widely experienced forest engineer has told me of killing twenty-two porcupines during a season in one camp. This represents merely the surplus population on probably a very few acres of one of their favourite habitats.

I again emphasize the fact that little is known of fish or game populations or the migrations, feeding habits or diseases of game. Scientists who know most about the subject were the least sure of their information or the solutions to the various problems, while those who had little or no authentic data were ready with all the answers for their own localities.

In the past, the policing aspects of the work of the Game and Fisheries Department have been accentuated, but it is gratifying to note that since the transfer of these activities to the Department of Lands and Forests, a scientific approach has been inaugurated toward the study of fundamental problems. This policy should be carried on with increasing vigor.

A relentless war should be continued on poachers and the buyers of their illicit catch of furs, with heavy fines and the cancellation for life, or for at least five years, of the licenses of these latter human pests. To this should be added a refusal to issue, during the period of cancellation, a license to any member of the immediate family of a buyer so convicted without a full investigation of the applicant. From information received from many sources concerning illegal dealings in furs, it is evident that the trail of corruption pursued by this class of criminal has been altogether too long and that the penalty for following it should be increased drastically.

CHAPTER XIII

Research

Probably the most notable impediment to the proper consideration of almost any phase of forestry in Ontario is the lack of fundamental data concerning it. No matter what avenue one now attempts to explore, it sooner or later develops that positive conclusions are impossible because of the lack of scientific and precise data.

Enumerated below is a partial list of the subjects on which precise data is required but is not available on any scale comparable with needs:

(A) Definite knowledge lacking and urgently needed on—

- (1) Rates of growth in stands of varying ages and compositions on different sites.
- (2) Reproduction following various cutting-methods on different sites and in different types.
- (3) Effect on future forests of various methods of slash-disposal under different forest-types and cutting-methods.
- (4) Effect of fires on cut-over areas.
- (5) Effect of different cutting-methods on biological life in the forests.
- (6) Losses from insects and diseases, and their long-term effect on forests.
- (7) Comparative costs of different systems of silvicultural treatment.
- (8) Sinkage losses on drives and how to minimize them.
- (9) Causes of decay and disease in standing timber.
- (10) Species best suited to planting on heavy soils and swamp areas and the methods to be followed.
- (11) Species and methods to be used for planting on limestone plains.
- (12) Development of lighter and more efficient forest-fire pumps.
- (13) Forecasts of fire hazard.
- (14) Fish and game populations and their migrations under various conditions.

(B) Pressing needs in utilization research concerning—

- (1) The possibilities and economics of developing products of higher category than is now the practice.
- (2) The possibility of development of more efficient basic manufacturing methods. Present methods, particularly in sawmilling, are to a large extent due to tradition.
- (3) Utilization of waste products of forest industries.
- (4) Development of new products and new uses for present products.
- (5) Processes enabling the utilization of a higher percentage of the raw materials as primary products, both in the woods and in the mills.

(6) Methods for the more efficient handling, packing and transporting of low-value products of sawmills.

The handicap under which the Research Division has functioned is well recognized and the development of its activities, as personnel has become available, is a source of gratification. I wish, however, to emphasize the vast need for expansion in all lines of research activity and for the compilation of information in a readily usable form. Until unbiased and authentic data are available, our forest activities can only be carried on using rule-of-thumb methods and theories which are often far from sound. Research must assume an increasingly important role in all forest enterprises if they are to develop along sensible lines.

DOMINION GOVERNMENT RESEARCH FACILITIES AVAILABLE

The Dominion Forest Service has branches dealing with forest economics, silvicultural research which includes growth and regeneration studies, forest protection, forest survey and aerial mapping methods. It maintains two well equipped forest products laboratories and five experimental stations in various parts of the Dominion, and co-operates in the activities of the Pulp and Paper Research Institute. It could and should serve as the agency for assembling and co-ordinating the work of the various provinces with its own. Every effort should be made to standardize methods of collecting and recording data so that results may be comparable with those in other provinces and will fit into the national picture. The benefits from such co-operation are many and without it the value of data obtained is considerably reduced.

FOREST EXPERIMENTAL AREAS

I recommend that the Province give serious consideration to the development of at least four experimental areas which should be established in locations typifying the growth and operating conditions over wide regions. The Petawawa watershed, or a considerable portion of it, would be suitable for one of these stations. I would suggest another in the Clay Belt, one in the Algoma district and one in the Lakehead region. These experimental areas should each extend over one or more minor watersheds and should be large enough to allow full-scale camp operations on a sustained-yield basis. All species should be cut and diverted to their proper economic uses. Different cutting and regeneration methods should be tried and comparative costs and results obtained and tabulated. A medium-size sawmill should be an integral part of each experimental unit. This would be necessary in order to permit of a properly developed, multiple-use operation and, in addition, the sawmills would be an indispensible need in conducting research work in connection with the lumber industry. Some research projects of this kind have been mentioned above.

I visualize these operations as training grounds for scalers, forest rangers, sawyers, clerks and all the junior grades of forest administrative staff. They would furnish pools of highly trained fire-protection personnel, strategically placed within three hours flying time of almost any fire in the area at present protected. A couple of trips with the Canso plane would furnish any large fire with a group of trained fire-fighters, each one of whom would be worth at least four of the type normally picked up from the local unemployed personnel in the district.

Any products resulting from the operations in these experimental areas could be sold in the open market and, if a loss is incurred, it might be charged to education and research. They might easily prove to be self-sustaining or better. In any event, they would provide proving grounds for methods and theories which could take much of the guesswork out of logging and silvicultural practices, and I can well imagine that many of the personnel trained on them might be enticed into industry. This would be a satisfactory means of extending sound practices learned on the forest experimental areas to the firms employing personnel so trained. I also foresee a mutually useful association between these research units and the Foresty School of the University of Toronto. The former would provide opportunities for both study and employment, the latter would act as a source of counsel and of trained and semi-trained technical assistants.

The areas could be utilized as the location of sample plots for many types of study, both in virgin forest and in cut-over areas and, I believe, could serve the forest industries even more fully than experimental farms serve agriculture.

CHAPTER XIV

Education and Publicity

In Chapter VII, I have recommended a new Division to be known as that of Education and Publicity. Wide personal contacts with all classes in the Province, and representations made at the public hearings of the Royal Commission, have convinced me of the need of broadened effort along these lines. The vast majority of the public know little about their ownership of the forests, their responsibilities and their potential control over forest operations and maintenance. They do not know of the legislation already in effect or of its impact on the forests. Many citizens at our public hearings advocated action which had already been taken toward the solution of the very problems they discussed.

If we are to overcome the inertia which has prevented sound forest policy for many decades, we must for a time concentrate public thinking on existing conditions and the methods by which they may be improved. The consequences of making these improvements and the alternative of leaving things as they are, should be clearly focused in the public mind.

To carry out a programme of the scope required to meet the needs of forestry, use must be made of every vehicle available to spread informative and factual information pertaining to the serious aspects of the provincial foresty situation. This will include talks and lectures at educational institutions, at service clubs, to members of trade associations and to the public generally. It will require the constant publication of suitable articles in the daily and weekly press and periodicals. Moving pictures, widely distributed to schools, and forums with radio addresses by prominent and nationally known citizens, should all play an important part in forestry propaganda for the next decade or more.

Training requirements call for several schools for instructing scalers, rangers, timber cruisers and clerical personnel for government service; and sawyers, foremen, cruisers, fire fighters, clerical personnel and cooks for industry. These could well be integrated with the forest experimental areas advocated in Chapter XIII. The full time of the school under construction at Dorset may be taken up in training engineering students from the School of Applied Science, undergraduates from the Faculty of Forestry and the staff of the Division of Fish and Wildlife, and with refresher courses for forest-protection and scaling personnel. I foresee needs much beyond the capacity of this school for several years ahead, as it must be realized that requirements far exceed the supply of trained employees in all the above-mentioned groups.

The need of a standard method of selection of candidates to be trained as scalers, rangers, clerks, etc., is stressed in Chapter X on Forest Protection and I again draw attention to it here.

The educational effort in forestry subjects in primary and secondary schools should be much more heavily stressed. It seems too much to hope that many extra classes in forestry matters can be added to the present curricula of lower schools. It should be possible, however, to instruct future teachers in the fundamentals of the subject during their term at Normal Schools and to give similar training by means of Summer Schools to those who hold certificates as teachers.

Instead of adding to public or secondary school curricula it should be possible, through a revision of text books, to include much sound forestry in the ordinary classes. Problems in arithmetic might be related to the growing or harvesting of forests. History and geography might well contain much that would be interesting and instructive to pupils concerning the devastation of forests and the effect on the nations concerned. For instance, in parts of Syria, which were once well forested and maintained a populous and wealthy civilization with large cities, the people devastated their forests and these parts are now virtually an uninhabited desert, with the old stone roads, built twenty or more centuries ago, standing several feet above the general level of the eroded countryside. The shores of North Africa were once well wooded and gave birth to huge cities like Carthage. With their forests gone, instead of remaining the granary of the Mediterranean, they became the deserts that Wavell and Rommel fought over a few years ago.

Bruce and Grey Counties were amongst the most prosperous in Ontario 50 or 60 years ago. To-day their population has shrunk by 40 per cent, with roughly one farm in every ten abandoned. Unless remedial measures are taken on a large scale, they are most likely doomed to further losses. Other areas in the Province are degenerating in the same way.

On the other hand, there are forests in Europe which have been cropped for hundreds of years with no sign of deterioration. In Sweden, the whole economy of the country is based on forestry and, in competition with the world, they have maintained their forests and a standard of living and happiness comparable with any to be found elsewhere.

These and many similar examples could be woven into the fabric of our school training and, coupled with school forest-plantations, within a quarter of a century there will have been produced a class of citizens jealous of our forest heritage and its place in our national life.

I consider the needs too urgent to be relegated to a branch within a Division of the Department and I would fear lack of sufficient stress to overcome past neglect if the handling of publicity were left to the less vitally interested direction of a general publicity bureau of the Government. It constitutes a full-time occupation for experts and enthusiasts, if the necessary aims are to be achieved. **I therefore recommend that the work be carried out by a new Division of the Department.**

CHAPTER XV

Export of Pulpwood

During the public hearings of the Commission, the question of the export of unprocessed pulpwood from Crown lands came under criticism more often than any other aspect of forest exploitation in this Province. The attack was exceedingly bitter from some directions, but some of the exporters made a vigorous defence. Probably the most telling blow administered was by a former exporter who characterized as "economic suicide" the recent widespread practice of cutting wood by prisoners-of-war, and shipping it out of Canada for manufacture.

Map No. 5 shows the percentages of the total quantity of export pulpwood originated in the various Forest Districts of the Province.

As outlined in Chapter I the matter of export of unprocessed wood has been a contentious subject for a long period. During the 19th century arguments first arose over the export of tanbark and later concerning sawlogs. The export of pulpwood from Crown lands is of much more recent origin.

Some companies purchased freehold lands many years ago and for twenty years or more have been exporting pulpwood purchased from settlers, in addition to that cut on their own freehold land. As it turned out, the purchase of pulpwood from settlers for exportation had much the same effect as if it had been taken from Crown lands. Most of the wood so obtained came from pseudo-settlers who, after being located for free grants on well wooded lots, abandoned them after clearing off the pulpwood and selling it to domestic mills or to exporters. The pseudo-settlers then took up new lots and repeated the process as often as it became necessary to do so. Hundreds of thousands of acres of lands capable of growing splendid forests, but marginal or sub-marginal as farmlands, have been devastated in this manner. The Lakehead area and the Clay Belt along the Canadian National Railway west of Cochrane bore the brunt of this onslaught, and thousands of lots have been abandoned in these areas.

The acreage of forest land thus denuded in the past quarter century is shown in the diagram below.

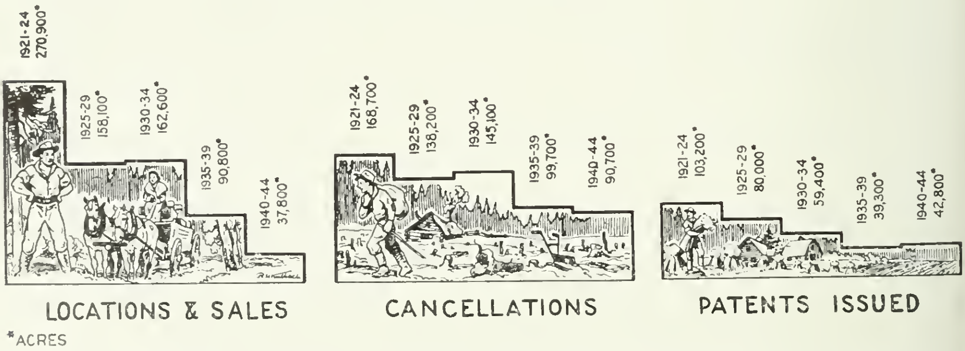


Diagram indicating the comparatively small part of the acreage devoted to colonization which was genuinely settled as contrasted with the much larger area stripped of timber and returned to the Crown.

Few real settlers remain on the land so alienated and of those who have remained in the Clay Belt, many continue to be aided by supplementary annual permits to cut 50-250 cords per family on other lots in their vicinity.

About 15 years ago it became apparent that the quantity of pulpwood produced, on lands set aside for colonization within economic hauling distance of the railways (seven or eight miles on either side), could not be further increased and, in fact, would soon have to be drastically reduced by reason of denudation. New sources were necessary if the dealers involved in the trade were to supply their customers, both domestic and foreign.

At that time Ontario, with the rest of Canada, was suffering from unemployment and it is not difficult to appreciate the temptation which the promise of gainful employment for woods labour presented to the administration of the day. They succumbed to the temptation and there can be little, if any, blame attached to them, even though it meant the reversal of a policy which had become almost a religion with previous administrations in this Province, and is still the inflexible policy of the Province of Quebec, namely, the retention for domestic (Canadian) use of all wood cut on Crown lands.

The story is well told in the evidence of the Minister of Lands and Forests before the Select Committee of the Legislature in 1940. He testified that the change in policy was required:

(a) as an employment scheme, and

(b) as a salvage measure to remove overmature timber.

Whatever may have been the situation when the policy of export was first inaugurated, neither reason is now soundly based. The giving of employment in the woods to a few hundred men in order to export pulpwood merely makes it possible for mills to continue in operation in another country instead of being established in Canada and giving employment here. However, as a short-term expedient in a period of unemployment, the practice cannot be condemned. The latter reason, however, does not apply to-day at all. The field work of the Commission did not reveal any exporter working in overmature timber. Many spruce stands which were being cut were in age-classes between 100-135 years, but there is little sign of deterioration in such stands until after 175 years.

The Minister cited the quantities produced in and exported from the Thunder Bay region in 1937, as follows:

	Cords	Cords
Permissible cut of spruce and balsam..........	742,000	......
Spruce and balsam used by domestic mills.....	......	425,715
Spruce and balsam exported from Crown lands.	......	218,067
Net excess over exports and consumption......	......	98,218
	742,000	742,000

He expressed satisfaction with the situation and argued that a further 100,000 cords could have been exported without detriment to the local situation.

Most of the earlier export agreements contained provisions requiring the building of mills in Ontario, but in no single instance did any of the signers fulfill their obligations in this respect with the result that the agreements were subsequently cancelled. In some cases, re-negotiations of agreements have more specific obligations concerning the building of mills.

The export of unprocessed wood has however progressively expanded till, in 1946, the total permisslble cut for export amounted to roughly 890,000 cords from Crown lands, with an additional 50,000 cords from the Algoma Eastern Railway lands exportation from which is subject to government control and export levy.

The transfer of cutting for export from so-called private lands to Crown lands is graphically portrayed in the following table based on information supplied by the Department of Lands and Forests.

PULPWOOD EXPORTED FROM ONTARIO

Year	Cords cut from		Total	Adjusted Totals*
	Crown Lands	Other Lands		
1928	840	611,984	612,824	......
1929	4,872	423,579	428,451	......
1930	191	496,343	496,534	......
1931	860	402,587	403,447	......
1932	35,407	109,362	144,769	......
1933	26,240	190,566	216,806	......
1934	84,042	196,115	280,157	......
1935	45,413	220,741	266,154	......
1936	118,633	221,698	340,331	......
1937	218,067	283,496	501,563	......
1938	324,844	288,212	613,056	......
1939	258,654	174,506	433,160	......
1940	362,481	188,346	550,827	......
1941	404,328	230,970	635,298	689,300
1942	482,597	254,450	737,047	790,000
1943	408,504	174,491	582,995	621,000
1944	250,220	134,358	384,578	401,000
1945	395,441	153,914	549,355	568,000
	3,421,634	4,755,718	8,177,352	......

*Totals after 12½ per cent. adjustment for conversion of cords of peeled wood to cords of unbarked wood.

During the season 1945-46, 2,424,419 cords of spruce, balsam and jack pine pulpwood were cut on Crown lands under lease and of this amount the Department of Lands and Forests approved the export of 843,931 cords. In addition to the above amounts, 29,434 cords of poplar pulpwood were cut on leased Crown lands and 81,200 cords of all kinds of pulpwood were cut under permit on Crown lands not under lease. A portion of these two latter amounts was cut for export, but the Department will not know how much until applications for permission to export are received. Of this quantity, some would be shipped to domestic mills and compensating adjustments made. How much actually left the Province cannot readily be ascertained. There are three sets of figures: those of the Department of Lands and Forests, those of Canadian Timber Control and those of the Dominion Bureau of Statistics.

Comparison of these figures necessitates adjustments for different conversion factors between cords of peeled wood and cords of unbarked wood. The Department ignores this difference. Timber Control adds 1/7 or 14.3 per cent to the figures of peeled wood and the Dominion Bureau of Statistics adds 1/8 or 12½ per cent to peeled cords. In order to get a reasonable comparison between the three sets of returns, all quantities of peeled wood reported have been adjusted on the 12½ per cent ratio.

On the above basis the following comparative figures emerge:

REPORTS OF EXPORT OF PULPWOOD FROM ONTARIO

	1943	1944	1945	1946
	Cords	Cords	Cords	Cords
Ontario Department of Lands and Forests	621,000	401,000	568,000	794,000
Canadian Timber Control	660,000	477,000	590,000	830,000
Dominion Bureau of Statistics	668,000	547,000	655,000	(Figures not yet available)

In compiling its export figures, the Department relies on clearances given to exporters by District Foresters, and has an arrangement with the Customs Division of the Federal Department of Revenue to hold up at border points shipments not covered by clearance papers. It seems possible that this latter arrangement could be defeated. The final Timber Control figures are compiled from returns made by the importers who receive the wood, checked against tentative figures supplied by the exporters when applications for permits to ship are forwarded to the Federal Department of Trade and Commerce. Dominion Bureau of Statistics figures are based on clearances through the Customs Ports at Ontario border points. Because a good deal of wood from other Provinces leaves the country at points in Ontario and because a certain amount of Ontario wood is exported through Customs Ports in Quebec, some adjustment has had to be made in the Bureau of Statistics official totals to arrive at a fair estimate of the quantity of Ontario wood leaving the country. It is impossible to arrive at a precise answer because no record is kept of the points of origin of the pulpwood exported, but by inquiry this Commission has arrived at what it believes to be a reasonable adjustment. It is physically impossible for customs officers to measure individual shipments but the shipments are checked against the exporters' estimates of the quantities loaded. It will be noted that, with 1944 an exception, there is essential agreement between Timber Control and Dominion Bureau of Statistics figures. Preliminary Dominion Bureau of Statistics figures for 1946 indicate that similar agreement will apply.

INCREASED INVENTORIES OF WOOD CUT FOR EXPORT

Figures relating to shipments of pulpwood apply to calendar years. At the 1st of January each year, Ontario exporters report to the Canadian Timber Control the quantity of exportable pulpwood cut but not exported at that date. This carry-over was reported as 392,000 cords as of January 1, 1944. The corresponding figure for 1946 was 995,000 cords, with preliminary but not complete figures for January 1, 1947, showing a similar amount. This indicates an increase in inventory in Ontario of slightly over 600,000 cords or, in other words, the cutting by exporters since 1943 of that much more wood than they have exported. No doubt some portion of this wood has gone to domestic mills, but it would amount to less than one-third of the above quantity.

The figures quoted, I believe, emphasize the necessity for a close and more comprehensive control by the Government over shipments of wood. There are many weakesses in the system which permit of overshipments, or result in the confusion of accounts between wood cut on Crown lands and private lands. There are certainly signs of confusion shown by the figures in the above tabulations.

The interlocking characteristics of some of the exporting companies and individuals make it difficult to trace the destination of some of the wood without an intimate study of the records of the various operators concerned. (One dominant individual is identified with five exporting organizations.) I decided that detailed investigation into this subject was not justified as it would, of necessity, cause considerable delay in the presentation of my report and the general trend in relation to pulpwood exports is sufficiently clear without allotting the exact share of the trade to each participant.

EXPORT AGREEMENTS

Since 1937 many export agreements have been negotiated, with keen bargaining apparent in practically all of them. In my opinion, the welfare of the Province has not always been adequately safeguarded. In many of the earlier agreements which provided for the establishment of Ontario mills, the size of the mill specified and its description indicates that it was merely a pawn in the game of obtaining limits carrying export privileges. In instances involving large areas of timberland, a 100-ton pulp mill would be specified, but no mention would be made as to whether it was for the manufacture of groundwood pulp or of chemical pulp, though the latter type of pulp requires almost double the quantity of wood.

The trend of pulpwood agreements generally has been toward increased export shipments of unprocessed wood, without comparable increases in domestic production of pulp or paper. In one instance the largest shareholder of a company having an export agreement purchased the shares of the other corporations involved which in turn were given new export privileges; the result is that the total quantity of pulpwood which may now be exported, from the total area now involved as a result of the deal, is almost double the original quantity.

At the present rate of cutting, few of the exporters have sufficient limits to provide for operations on anything approaching a sustained yield basis. The maximum annual cuts provided for in most of the agreements grossly exceed the possible annual growth on the areas involved under the cutting methods used or likely to become feasible in the near future.

Annual cuts permitted by export agreements vary from slightly under one quarter of a cord per acre per year to over a cord per acre per year. The average for the group is well above that permitted on Sweden's managed forest lands, which is just under one-third of a cord per acre per year, where sound silvicultural practices are the rule. Practically all agreements, however, have a saving clause which obligates the operator to practice "good forestry". Except under unusual circumstances, "good forestry" precludes cutting in excess of the annual replacement. While the "good forestry" clause has not been observed to date, it should be invoked at least to the extent of keeping the annual cut commensurate with the annual replacement under the silvicultural system practiced.

One export agreement permits the shipment to the United States of one cord of wood for each cord used in the domestic mill built under the agreement. It also contains a clause which obligates the company, at the direction of the Minister, to cut into sawlogs, poles, etc., material suitable for that purpose. I am convinced that only by avoiding expansion in domestic production, and therefore in exports, can the timberlands concerned continue to furnish wood in perpetuity for all three purposes. Several clauses in this agreement are indicative of very keen bargaining to guarantee a specified quantity of wood for export before any effort is directed toward the provision of wood for domestic mills.

I wish to draw attention to a clause in one export agreement which provides for the export of a maximum of 25,000 cords of spruce and balsam annually until 1962, "notwithstanding the provisions of any Act or Regulations from time to time in force respecting the exportation of pulpwood." This clause attempts to place a private contract in a superior position to the laws of the Province and, while it is probably worthless, it might be very misleading to security holders and possibly to junior officials in the district.

I recommend a review of all export and domestic agreements, with a view to the adjustment of permissible annual cuts to correspond with the probable annual growth on the areas involved. Until such time as annual growth has been definitely established, beyond shadow of doubt, by proper growth studies approved by the Department, it should be calculated at a rate not exceeding 10 cubic feet of conifer timber per acre per year over the superficial area of the limits involved.

It should be realized that export agreements now extend over more than ten thousand square miles of some of the best remaining timber stands for the production of sawlogs, ties and poles. Other export areas also contain materials suitable for these uses, but not to such a marked degree.

NEWSPRINT CLAUSE IN EXPORT AGREEMENTS

Much weight has been attached to the clause inserted in all export agreements prohibiting exported pulpwood from being utilized in the manufacture of newsprint. In my opinion, this clause is of little effect in that pulpwood exported from Ontario goes into the United States pulpwood pool and relieves that pool of some of the competition between newsprint manufacturers and others. It matters little which cord goes to the newsprint mills, one from Ontario or one from the United States or any other source made available by the shipment of a cord from Ontario. As mentioned earlier in this report, paper made in United States mills competes on the home market with that made in Canada.

EFFECT OF EXPORT OPERATIONS ON THE WOODS WAGE STRUCTURE

Another feature, which may not have occurred to the general public, is the woods-labour situation created by the expanded export trade in pulpwood in the past five years. Some exporters permitted their woods operators to outbid domestic companies for labour during the later war years and the post-war years. This had a very unsettling effect and frustrated the best efforts of the domestic mills who were endeavouring to maintain controlled wage ceilings. Overbidding for labour is admitted, and even glorified, in a brief presented before the Commission by one of the larger exporters. I quote from this brief: "I managed, through the Legion, to interest 35 men all quite young, from 20 years of age and up. They were all without previous experience. Some of them were quite frail. *As an independent* (italics by the Commissioner) I was able to take these men and to guarantee them not only a decent living wage, but a very generous wage if they would only try the job. We started them off with a flat guarantee for the first month, a salary much higher than any of them had received previously. They all tackled the job in great style and learned very quickly. We made the top wages retroactive from the commencement of the work, then placed them on a piecework basis, which netted them between $12.00 to $14.00 per day clear, and at the end of the year they received a bonus of $16,000 for the group."

The effect of such action must be most upsetting to skilled mechanics and professional men who spend years in gaining skill, only to find themselves earning much less than relatively untrained pulpwood loaders. Such action has been gravely damaging to the morale of woods labour and has created an almost intolerable situation for the operator who must control his cost structure in order to remain in business.

In my opinion, one of the main reasons why exporters have been able to permit such tactics is the financial condition of their companies as compared to that of Ontario companies. Funded debt and other financial obligations of the former have been liquidated over many years of operation and their financial burden per ton of production is therefore much lighter than that of the newer Canadian mills. This is clearly indicated in the table below.

CAPITAL AND CURRENT LIABILITIES OF THE PULP AND PAPER INDUSTRY OF CANADA AND THE NORTHERN UNITED STATES IN 1945*

(By percentage for regional groups of representative firms)

Regional Group	Number of firms in Group	Bonds, loans, deferred bond interest, etc.	Preferred Stock	Common Stock and Surpluses	Current Liabilities
Northeastern States[1]	14	12.0%	10.0%	68.3%	9.7%
Lake States (firms with no Canadian plants)	20	14.3%	11.0%	62.6 %	12.1%
Lake States (firms operating plants in Canada)	4	20.0%	9.6%	60.4%	10.0%
Ontario[2]	10	37.4%	29.3%	25.7%	7.6%
Quebec, New Brunswick and Nova Scotia[3]	7	50.9%	4.2%	36.3%	8.6%

*Compiled from "Moody's Manual of Investment, 1946."

[1] Including several firms with extensive freehold or leased timberlands in Eastern Canada.

[2] Including some firms also operating in other provinces and two firms whose most recent published financial statements were for 1944.

[3] Including one paper company and six of the largest pulp and paper companies, the latest financial statements for two of which were for 1944.

It is natural for domestic pulp and paper mills to feel that some of the differential indicated has been utilized in outbidding them in the woods-labour market.

EFFECT ON LUMBER INDUSTRY

Labour rates on pulpwood operations are inevitably reflected in the cost of sawmill operations. The effect of rising woods-labour rates, combined with controlled domestic prices, is disturbing. Sawmill operators were compelled to sell half to two-thirds of their lumber at closely controlled prices on the local market. In order to remain in business, the lumber industry claims it has had to obtain export prices sufficiently high to compensate for the lower prices on domestic sales. What may be the long-term result of this policy of making export sales pay for domestic losses is a problem which will have to be faced when the present boom market for lumber has passed and Great Britain, Canada's traditional market for lumber, will have Russian and Scandinavian supplies available in abundance. Goodwill sacrificed is difficult to regain.

I am not advocating low woods-labour rates and will treat with that subject in a later chapter. There must, however, be some stability and some control of such rates, otherwise both industry and labour will eventually suffer.

EXPORT FROM CROWN LANDS NOT UNDER EXPORT AGREEMENTS

In addition to pulpwood exported under agreements which have been made public, there have been smaller but substantial amounts cut on concessions or on lands under license which, according to the original contracts with the Crown, carried no export rights whatever but on which permission to export has since been granted on a year to year basis.

In the case of one company, in spite of the fact that their contract specifically states otherwise, export of substantial amounts of jack pine is permitted, although this same company has closed its two sawmills which formerly contributed large quantities of lumber, ties, etc., to the provincial output.

There are sixteen other limit-holders who have export permits and they have cut over 80,000 cords during the past season. It is not feasible to ascertain exactly how much of this material has been exported.

BENEFITS CREATED BY EXPORT OF PULPWOOD

The preceding paragraphs have recited many, if not most of the drawbacks inherent in present export agreements and practices. It would be entirely unfair to close this chapter without presenting the other side of the picture.

It should be appreciated that the export of unprocessed pulpwood has yielded millions of dollars to Ontario in Crown dues and revenue of that nature. It has paid further millions in wages to woods workers (some of whom were prisoners-of-war), much of which was paid in years when it was desperately needed. Transportation systems and suppliers of equipment, food and fodder for woods operations have reaped substantial benefits from the trade. It has had a stimulating influence on the price of pulpwood which farmers and settlers produce from their lands. This is not the least of its benefits, and provides one of the soundest arguments for the continuance of exports. The Canadian representatives of the United States companies involved are, in general, a splendid type of citizen and many of them have given generously of time and money to philanthropic causes. Most of the companies have co-operated liberally with Canadian industry in the development of logging technique and equipment.

GENERAL COMMENT ON EXPORT OF PULPWOOD

If the unsound forestry practices inherent in existing agreements were eliminated; if the use of unfair and destructive tactics in the hiring and paying of woods workers were stopped; if, instead of "mining" spruce, the companies concerned concentrated on the removal of all pulpwood species in relation to their occurrence on their limits and finally, if the present illogical grouping of

A good pulpwood stand on the limit of an exporting company.

limits operated were rationalized, I am convinced that there would be an even greater quantity of wood available, over and above the present domestic requirements, than is the case at present. The possibilities and methods will be treated with in the final chapter of the report.

Whether the export of unprocessed wood is sound as a long-range policy for Ontario is open to grave doubts. I cannot believe that any system of long-term agreements, which permit over-cutting of timber and "mining" of the most desirable species, is a sound policy. As long as the present export policy continues in effect, the people of this Province may well be classed as "hewers of wood" for the United States mills who are the beneficiaries. It is to be noted that no Canadian company which has an export agreement has a Canadian paper mill dependent upon the area leased. It is only by manufacturing a more highly developed product than pulp that we shall reap the optimum advantage of our forest resources.

For the present, export can be defended and any remedial action taken should be gradual rather than precipitate. The national feature of the problem should be properly weighted but not overweighted, as is the tendency in some circles. Companies which have maintained operations in the Province for many years have a greater claim to consideration than those which have entered the field recently.

I was much impressed by the argument in one brief presented before the Commission. It pointed out that unprocessed pulpwood exported has a value of roughly half a cent per pound, but if this same wood were processed it would result in a product worth at least four cents per pound and possibly several times that amount. The difference in cost per pound between the pulpwood stage and that of the finished product would be made up largely of wages paid to Canadian labour. **I subscribe to the idea expressed, and recommend that the future policy of the Province be aimed toward the development of the final product at the higher cost per pound.** In the meantime, there should be made available for export only the annual growth which is surplus to the needs of present domestic enterprises and their normal expansion, including the building of new mills.

CHAPTER XVI

Labour

The woods workers in different parts of the Province work under a wide variety of conditions with respect to wages, housing, feeding, transportation, etc.

Present day conditions are very different from those existing on lumbering operations in their hey-day, when workmen signed on for the "run" or until operations were completed, and lived under somewhat primitive conditions of housing and feeding. In those days the "lumberjack" usually returned year after year to the same company and served it with a fierce loyalty, even to the extent of engaging in physical encounters with competitors. There was an intense pride in workmanship, and men vied with one another in cutting or hauling more logs than their comrades and in being the last man ashore when the jam in the river was released. Companies were smaller, and a more personal relationship existed between employer and employee than is at present possible.

Monthly wage-rates, extremely low in comparison with to-day's earnings, were then the rule, with piecework almost unknown. Workmen's Compensation, and Health Department inspections were almost unheard of, but it should be mentioned that the more responsible lumber operators in those days were generally kind and generous to employees suffering accident or illness.

To-day the story is of almost a complete reversal of these conditions. Woodsmen do not return year after year to the same employer. There is little evidence of loyalty to, or affection for, the corporations employing them. They rarely, if ever, see or know the "big boss" who is responsible for their well-being or their shabby treatment, whichever may apply. There seems to be little pride in accomplishment of good work well done, and the production rate per man-day is falling. About the only similarity to the old conditions which remains is the lack of thought for the future of the resources from which they make their living. Unfortunately this is not to be wondered at, as it is apparently the attitude of the general public.

Living-conditions in camps are healthy and comfortable, though not very attractive. Food is generally of top quality, and many woods workers suffer gastric disturbances because of its richness. Workmen's Compensation provides for lost time and impairment of earning capacity, of either a temporary or permanent nature, resulting from accident. The Department of Health ininspects and reports on camps, though many of the camps of small jobbers and "shackers" seem to have been missed. **I recommend a much more thorough examination of these smaller camps, as I believe the conditions which were apparent in many small camps during my inspection tour in 1946 would not be tolerated under even a lax system of inspection.** Practically all the larger camps across the Province were satisfactory from the hygienic standpoint, though in some instances I was struck by the fact that drier sites could have been selected.

Larger camps are normally electrically lighted and arrangements are provided for washing clothing, by contract, at low rates. Drying-rooms for wet clothing are usually provided although medium-size and smaller camps, in many cases, still permit drying of clothes in living quarters.

Cooks are not generally well trained, and are wasteful. No standard of training has been set up, except on a very minor scale through courses for cook instructors under the auspices of the Woodlands Section of the Canadian Pulp and Paper Association. Wide possibilities for saving exist in the preparation of food. A drive conducted during wartime by the Army to eliminate waste by improvements in the training of cooks, the provision of weekly diet sheets and the daily inspection of garbage cans, resulted in reductions in Army food costs per man-day (exclusive of preparation) to roughly one-half those generally applying on woods operations in this Province. It is true that the woods worker requires more calories than the soldier in camp, but he does not require twice as many.

There will be more than 10,000,000 meals served on woods operations and drives this year in Ontario. It is not difficult to see the savings possible through the reduction of meal costs by one cent. From Army experience, I am certain that food costs could be cut by at least 10 per cent (roughly three cents per meal) through the proper training of cooks and the elimination of waste. This could be accomplished concurrently with an improvement in the quality of the meals and a diminution in gastric disturbance caused by excessive quantities of grease and shortening, both of which are difficult to obtain. The possibilities of central baking and cooking, with distribution of food in thermos containers to woods workers, comparable to Army practice, have not been appreciated and no procedure of this kind has been attempted on any considerable scale.

Industry is missing a splendid opportunity by failing to develop a central cooking school where men and women of proper aptitude could be taught to prepare suitable food for woods workers and, through prior arrangement of menus, to avoid the waste which is inevitable when three or more kinds of meat and half a dozen types of pastries are placed on the tables at each meal.

Payment of woods workers by piecework has resulted in many anomalies and much that is detrimental to forest management. Workers naturally demand to be allowed to cut in the best stands, with resultant high-grading of the forests. Poor stands are left to be cut by day-labourers, with few or none in sight because of the high piecework rates. Rates now paid permit a skilled and energetic workman to earn sufficient for his needs by working between 15 and 20 days per month. This reduces the amount of wood produced per man per season, thereby accentuating the labour shortage. Many workers consider that income tax deductions take too high a toll from their earnings after $200 per month or thereabouts has been earned, and consequently desist from what they term "working for the Government". It is almost impossible to get men to work at the less attractive jobs at any wage or piecework rate, as long as the rates for cutting permit them to earn a sum commensurate with their views on income tax and sufficient to enable them to take a few days off during the month to spend it.

I recommend the joint study by representatives of woods labour, industry and the Government, of a more reasonable wage structure than that which presently exists on forest operations. I am convinced that some type of daily or monthly wage schedule would be a healthier basis on which to build than the present piecework system (if it can be called a system), for there are so many variations which may be applied. I

further believe that group incentives for camps or other units can be evolved which will minimize the effect of the reluctant worker.

Evidence was given, by the gold-mining group centred at Geraldton, that men earning rates from $8.00 to $11.00 per day were leaving the mines for woods operations. One large operator gave evidence that he was paying unskilled pieceworkers on pulpwood loading operations $12.00 to $14.00 per day, with a bonus at the end of the season. Pieceworkers taking out poles can easily earn more than that at prevailing rates. Such rates can only arouse consternation amongst skilled mechanics and professional men who spend years acquiring skills which result in lower earnings; unless controlled, they can only start another dizzy spiral of ascending rates which eventually will remove Ontario from competition in world markets.

I subscribe to the idea that a good forest worker requires skill, intelligence and stamina equal, if not superior, to that required by most of his opposite numbers in the mills. His pay and treatment should be commensurate. The hourly rates now earned by many pieceworkers exceed all but the highest rates paid in paper mills. This does not appear to be equitable and an unbiased reconsideration of the situation by both labour and industry is indicated.

I strongly recommend the brightening of living conditions, including more privacy for the individual, and the improvement of recreation facilities in camps so that they may compete in a measure with the drawing powers of the nearest beer parlors. Together with this, an attempt should be made to create forest communities along lines advocated in Chapter XIX.

As mentioned earlier, I also recommend a joint study by the interested groups of an alternative to the present piecework system, and the substitution of a more sensible method of paying workers.

CHAPTER XVII

Measurement of Timber

As mentioned elsewhere, the measurement of timber for payment of stumpage is far from an exact science in Ontario. There are cords of three different contents recognized for the same stumpage rates. Strangely enough, the operator who cuts four-foot unbarked pulpwood and whose practices for that reason normally result in the best utilization, is penalized in comparison with those cutting longer lengths or taking out peeled wood.

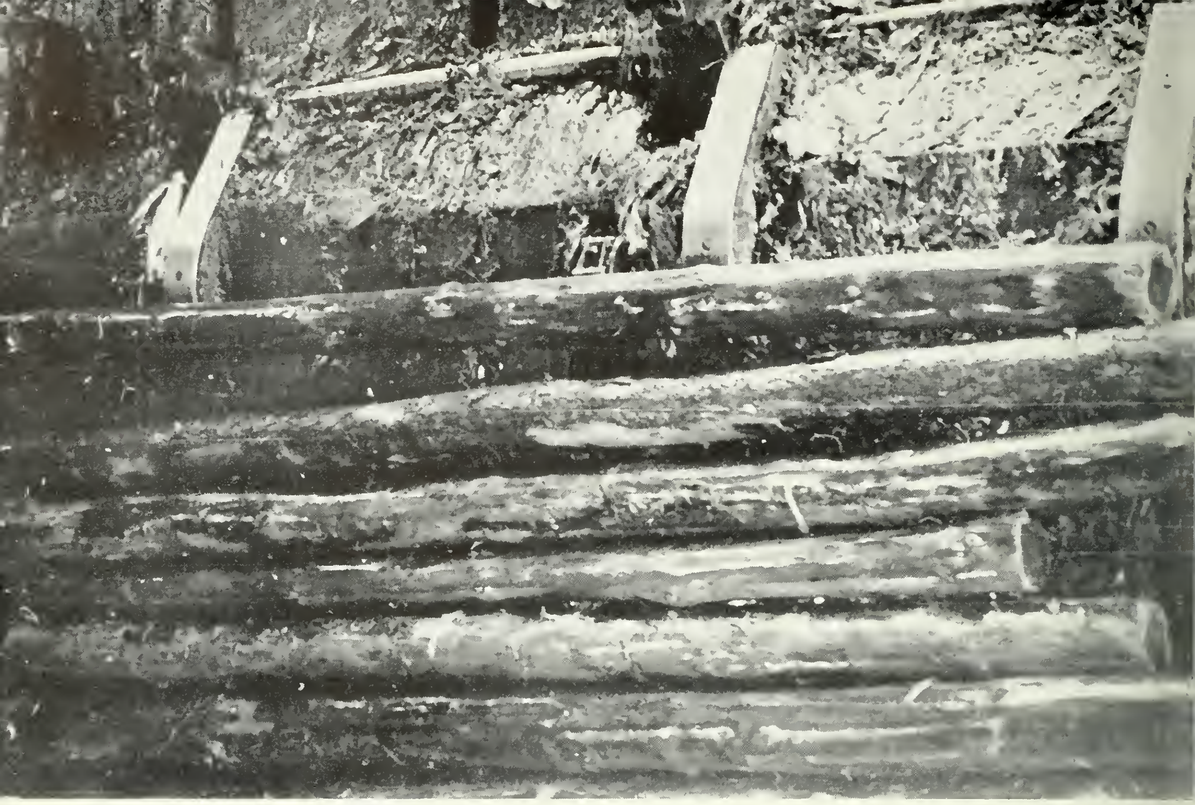
The most surprising feature in the measurement problem is the survival of the Doyle rule long after all other provinces have discarded it. Its main effect is to conceal true values and to bonus inefficient and harmful practices. Some license-holders pay stumpage on Doyle rule and sell the product to sawmills on Quebec log-rule which gives a much higher content than the Doyle rule does for the same log.

It was developed as a rule-of-thumb method of measuring large logs and, while it does not give absurd results for logs over 15 inches in diameter, it does result in a very considerable undermeasurement. It has been the official rule in Ontario since 1879.

A comparison with the International ¼-inch rule, the Quebec (Roy) rule and the New Brunswick rule is enlightening:

Small end diameter of log	Volumes of 16-foot logs			
	Doyle Rule (Ontario)	International ¼″ Rule	Roy Rule (Quebec)	New Brunswick Rule
6″	4	20	20	20
7″	9	30	29	31
8″	16	40	39	40
9″	25	50	51	48
10″	36	65	65	64
11″	49	80	80	80
12″	64	95	97	96
13″	81	115	115	112
14″	100	135	135	130
15″	121	160	157	150
16″	144	180	180	170
17″	169	205	205	198
18″	196	230	231	229
19″	225	260	259	261
20″	256	290	289	300
21″	289	320	320	327
22″	324	355	353	362
23″	361	390	387	376
24″	400	425	423	432

The low values for small logs which the Doyle rule gives is a temptation to operators on Crown lands to cut immature timber because of the large overrun and the amount of slab material made available. It should be emphasized



Small 16-foot logs on a sawmill log-deck. Log sizes may be gauged by comparing with the steel straps which are about five inches wide. Stumpage payable on these logs when measured by the Doyle rule will be less than four cents each. They will each yield about 30 board feet of comparatively low-grade lumber.

that none of the other rules above-mentioned over-scale if the sawmill concerned is efficient.

The absurdity of the Doyle rule in the measurement of small logs is more evident from the following tabulation showing cubic volumes.

One thousand board feet (Doyle rule) of 16-foot logs:

6	inches	in diameter	contain	1,070	cubic	feet or	12.1	cords
7	"	"	"	621	'	'	7.1	"
8	"	"	"	442	"	"	5.0	"
9	"	"	"	349	"	"	4.0	"
10	"	"	"	293	"	"	3.3	"
11	"	"	"	256	"	"	2.9	"
12	"	"	"	230	"	"	2.6	"
13	"	"	"	211	"	"	2.4	"
14	"	"	"	196	"	"	2.2	"
15	"	"	"	184	"	"	2.1	"

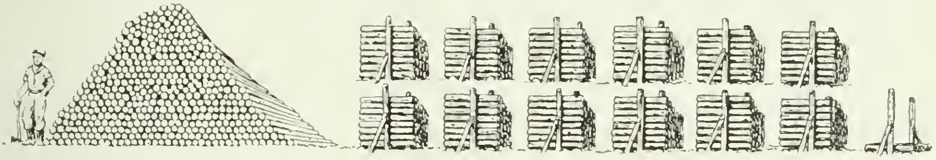
As mentioned earlier, the values for logs over 15 inches in diameter are not grossly out of line.

I have been told by those who defend the Doyle log-rule that the absurd results it gives are, in effect, rectified by the practice of bidding for stumpage, inasmuch as the size of the logs to be cut is taken into account by the bidders.

I have also been told that the Doyle rule is a good one because it "compensates" the operator who cuts small logs and thereby incurs high costs, though why the Crown should subsidize a practice which, in most cases, is both harmful and inefficient, was not explained. I have found little evidence which would give these defenders general support. In fact, the contrary is often the case. Taking the cutting of spruce sawlogs in the season 1945-46 as an example, I have compared the average size of logs scaled in each Forest District with the average revenue per thousand board feet (Doyle log-rule) for each District. I find that that District in which the largest logs were cut rated seventh (out of 13 Districts) in the revenue received. The District ranking second in order of the size of logs returned the lowest revenue per unit of all the Districts in the Province. The District ranking third in the size of its logs returned the highest revenue per thousand feet of all Districts. The same lack of any consistent relationship between the stumpage received and the size of the logs cut is evident in the case of the other species of timber.

Putting the products of the forests to uses to which they are not well suited always involves an economic loss but, because of the odd results arising from the use of the Doyle log-rule, such losses are greatly magnified in Ontario. For example, at the 1945-46 average rates of stumpage payment, the Government of Ontario sold 1,000 f.b.m. of six-inch spruce sawlogs for $5.74. These logs would make 12.1 cords of pulpwood providing a revenue of $20.31; thus a potential loss amounting to about 253 per cent of the actual revenue was incurred.

1000 f.b.m. (Doyle log-rule) of six-inch logs,



CROWN REVENUE $5.74 (AVERAGE)
6" SAW LOGS MEASURED BY DOYLE LOG RULE

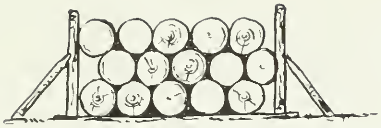
CROWN REVENUE $20.31 (AVERAGE)
SAME WOOD MEASURED IN CORDS.

The corresponding figures for logs of other sizes were as follows:

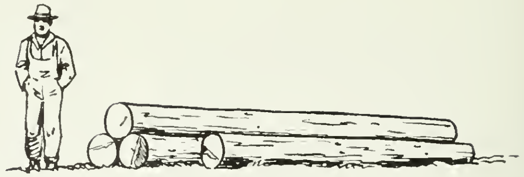
Diameter of sawlog in inches	Revenue per 1,000 f.b.m. sold	Potential revenue from same material if made into pulpwood	Potential loss of revenue as percentage of actual revenue
7	$5.74	$11.79	106%
8	5.74	8.38	46%
9	5.74	6.62	15%

On the other hand one cord of spruce pulpwood composed of 17-inch logs would bring only $1.67 revenue, while the same wood made into sawlogs would bring a revenue of $3.02; thus a potential loss amounting to about 81 per cent of the actual revenue was incurred.

One cord (or equivalent) of 17-inch logs.



CROWN REVENUE $1·67 (AVERAGE)
ONE CORD OF BOLTS 17" DIAMETER



CROWN REVENUE $3·02 (AVERAGE)
SAME WOOD IN SAWLOGS MEASURED BY DOYLE RULE

The corresponding figures for logs of other sizes were as follows:

Average diameter of pulpwood bolts in inches	Revenue per cord sold	Potential revenue from same material if cut in sawlog sizes	Potential loss of revenue as percentage of actual revenue
15	$1.67	$2.73	64%
14	1.67	2.57	54%
13	1.67	2.39	43%
12	1.67	2.19	31%
11	1.67	1.97	18%
10	1.67	1.72	3%

So, wherever a tree from Crown lands is put to a wrong use, the Treasury of Ontario is the loser and the Doyle log-rule ensures that this loss will usually be large.

It must be kept in mind that stumpage rates in sawlog agreements, as well as licenses, have been based on the Doyle rule; if, as I recommend, it should be eliminated, this fact should be taken into consideration and corresponding adjustments made in rates.

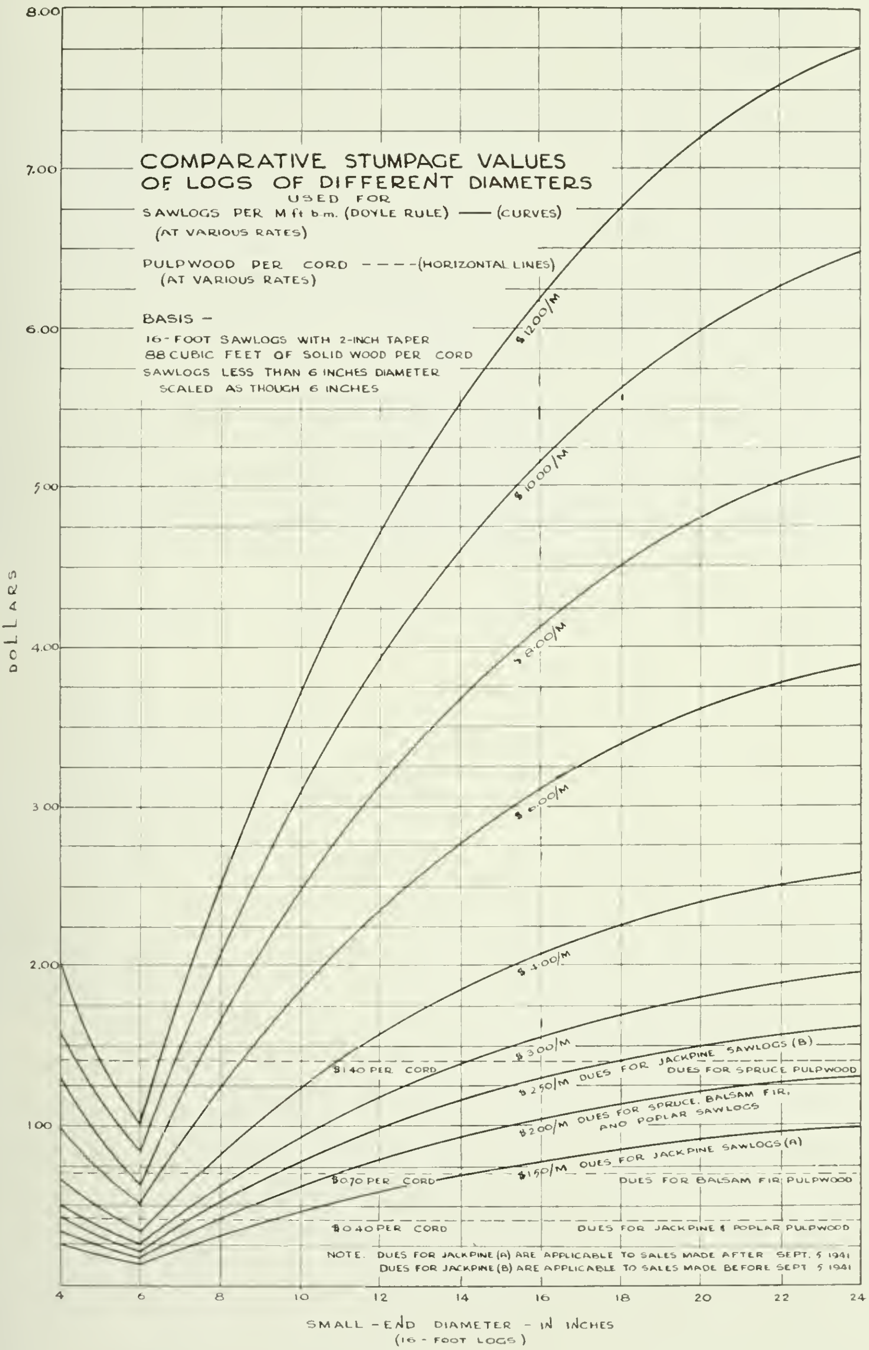
However, in the final chapter of this report I recommend a complete reorientation of the present concept of the allocation and methods of operating forest resources. I also recommend cubic measurement of all forest products, with a single stumpage rate for each species, regardless of the end-use of the wood. One of the present anomalies is that the lumber industry, with a comparatively low-value end-product, pays a higher stumpage rate per cubic unit of wood for logs over eight inches in diameter than is paid by the pulp and paper industry, which produces end-products of higher value. The curves below indicate the inequalities in existing practices and point the way to more sensible utilization. Logs in the low diameter-classes (under eight inches in diameter) should be utilized for pulp wherever it is possible to divert them to that use and, conversely, larger logs should be diverted to lumber manufacture.

The Chart on the opposite page shows how the relative values of sawlogs and pulpwood change with changing diameters of the logs or bolts. The solid-wood content of a cord is practically unaffected by the size of the bolts it contains, but the solid-wood content of one thousand board feet of logs, when measured by the Doyle log-rule, varies widely with the size of the logs. This chart shows that above a diameter of about eight or nine inches, sawlog operators pay far more for wood than pulpwood operators, while in the case of smaller logs the opposite is the case.

EXAMPLE OF HOW CHART MAY BE USED:

Question: *How does the value of spruce sawlogs at, say, $6.00 per thousand feet (Doyle log-rule) compare with the value of spruce pulpwood at, say, $1.75 per cord.*

Answer: *The horizontal line from the $1.75 point in the left-hand margin intersects the curve marked $6.00/M at the vertical line representing a small-end diameter of about 9¾ inches on the bottom scale. Therefore, sawlogs larger than 9¾ inches in diameter cost more than the same wood cut into pulpwood, while sawlogs less than 9¾ inches in diameter would be cheaper than the equivalent quantity of pulpwood.*


COMPARATIVE STUMPAGE VALUES
OF LOGS OF DIFFERENT DIAMETERS
USED FOR
SAWLOGS PER M ft b.m. (DOYLE RULE) —— (CURVES)
(AT VARIOUS RATES)
PULPWOOD PER CORD - - - - (HORIZONTAL LINES)
(AT VARIOUS RATES)
BASIS –
16-FOOT SAWLOGS WITH 2-INCH TAPER
88 CUBIC FEET OF SOLID WOOD PER CORD
SAWLOGS LESS THAN 6 INCHES DIAMETER
SCALED AS THOUGH 6 INCHES
$12.00/M
$10.00/M
$8.00/M
$6.00/M
$4.00/M
$3.00/M
$2.50/M DUES FOR JACKPINE SAWLOGS (B)
$2.00/M DUES FOR SPRUCE, BALSAM FIR, AND POPLAR SAWLOGS
$1.50/M DUES FOR JACKPINE SAWLOGS (A)
$1.40 PER CORD
DUES FOR SPRUCE PULPWOOD
$0.70 PER CORD
DUES FOR BALSAM FIR PULPWOOD
$0.40 PER CORD
DUES FOR JACKPINE & POPLAR PULPWOOD
NOTE. DUES FOR JACKPINE (A) ARE APPLICABLE TO SALES MADE AFTER SEPT. 5 1941
DUES FOR JACKPINE (B) ARE APPLICABLE TO SALES MADE BEFORE SEPT 5 1941
DOLLARS
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
4
6
8
10
12
14
16
18
20
22
24
SMALL-END DIAMETER – IN INCHES
(16-FOOT LOGS)

Before leaving the matter of the measurement of sawlogs, I want to emphasize most strongly that the abandonment of the Doyle log-rule in favour of a more accurate and equitable method of measurement, coupled with an adjustment in stumpage rates, will do much to promote both efficiency in sawmilling and good forestry practice.

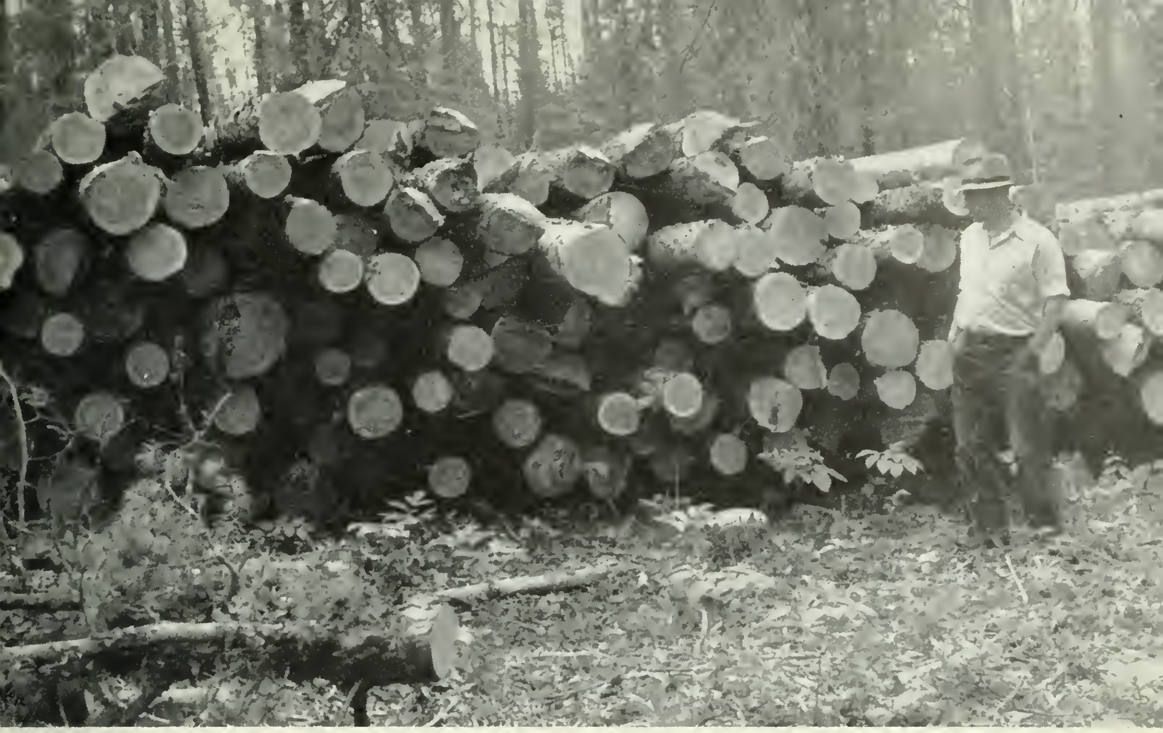
I am well aware that many lumbermen benefitting from the gross underscale by Doyle rule will not acclaim my recommendation, but I am convinced that the proposal I make in the final chapter of this report will far more than offset any loss of privilege Ontario lumbermen will suffer by reason of discarding it. I see no reason for continuing a privilege at the expense of the Crown at any time, but least of all do I approve when, by a rational approach to the whole problem, the interests of both the Crown and the industry can be advanced. If carried out, my recommendations will result in a higher revenue for the Province and lower costs of sawlogs and of sawing to the lumbermen; but—perhaps most important of all to both parties concerned—they offer a bright prospect for the continued existence of this vitally important industry, which certainly is not in evidence to-day.

In any revision of scaling methods, I recommend that the guiding principle be the greatest possible simplification commensurate with results of practical accuracy. I suggest joint study by government and industry of a method by which all logs or bolts will be tallied by full diameters and a series of possibly four grades established at different stumpage rates. Solely for the purpose of illustrating the principle I have in mind, I offer the following examples (the percentages and stumpage rates are only indicative):

Logs or bolts under 10% defective	Class A—Stumpage $4.00 per unit.
Logs or bolts over 10% but under 25% defective	Class B—Stumpage $3.00 per unit.
Logs or bolts over 25% but under 50% defective	Class C—Stumpage $2.00 per unit.
Logs or bolts over 50% defective	Class D—No stumpage.

This would simplify scaling and the scaler could be required to mark A, B, C, or D on the log-ends as he scaled, thus facilitating check-scaling. The highest stumpage would then be payable on the better logs, thereby encouraging the utilization of much material now culled and left in the woods.

As mentioned elsewhere, cords are not consistently measured on the same basis by the Department of Lands and Forests. **I recommend that the definition of a cord set out in section 22A of the "Dominion Weights and Measures Act", as passed on 25th May, 1935, be adopted. This states in part that "the cord shall contain one hundred and twenty-eight (128) cubic feet". I further recommend that the stumpage rate charged for peeled pulpwood should be higher than the rate for similar unbarked wood. The difference in rates should recognize, not only the difference in the actual volume of wood contained in a cord of peeled pulpwood as compared with the volume of usable wood in a cord of unbarked wood, but also the waste inherent in peeled wood operations. I consider that the rate per cord for peeled pulpwood should be not less than 15 per cent greater than the rate per cord for similar unbarked wood.**



An unevenly piled skidway of small sawlogs in Western Ontario. Because of the careless piling it would be impossible to measure accurately the lengths or diameters of many of these logs.

So far in this chapter I have dealt exclusively with the units of measurement used in scaling wood in Ontario, but before leaving the subject I should say something about the preparation of wood for scaling. I have commented favourably upon the manual of instructions which sets forth the duties of scalers and the working methods they should adopt. **I recommend that the next edition of this manual set forth the methods which operators should follow in piling logs or pulpwood bolts.** In my recent field inspections I have found many and widespread instances of poor piling of both logs and pulpwood. A large number of such piles were photographed and two of these photos appear as illustrations.

Poor piling practices make the work of the scaler both difficult and expensive, but I am even more concerned over the fact that they are also a possible cause of loss of revenue to the Province. **I therefore recommend that rules be drawn up setting forth the conditions which must be met in piling either logs or bolts, with appropriate penalties for their non-observance. These rules should provide that:**

(a) One end of all skidways or piles be flush so that both diameters and lengths may be measured.

(b) Only one species be piled in each pulpwood pile or, if mixed, stumpage shall be paid as if the contents were all of the species carrying the highest rate.

(c) No deductions to be made for faulty piling. (Percentage deductions for poor piling are impossible to check and the privilege

A poorly built skidway of pine sawlogs. Ends are uneven, thus making proper measurement of either diameters or lengths impossible.

Four-foot wood cut for export. The several species in this pile had to be scaled separately entailing scaling costs equal to, or greater than, the stumpage received.

is open to abuse at the expense of the Province. The remedy for the operator lies in his insistence upon proper piling.)

(d) Short logs be piled on top of larger ones in cases where logs of a different length are mixed on a skidway.

Pulpwood used in Ontario or exported through Ontario ports of exit may come from either Crown lands or private lands within the Province, or even from outside the Province. Once pulpwood has been scaled and started on its way to its destination, one stick becomes indistinguishable from another and after it has been moved from the landing where it was scaled, it is virtually impossible to tell whether or not it has been assessed for export levy. In my studies concerning permits or clearances for export, I have discovered several possible methods by which an operator could defraud the Government. I found no specific instances where this had been done, but I believe the possibility should be removed.

I therefore recommend that every stick of wood cut for export be distinctively marked, at the expense of the operator, either by the use of paint or by end-stamping with a hammer. This practice is carried out on certain streams in Quebec, for sorting between companies, and is entirely feasible.

CHAPTER XVIII

Land Classification

Contrary to the opinion of many, land classification is a very complex problem which cannot be solved by sending a soil specialist and a map-maker into a district to delineate those areas which may properly be allocated to agriculture, forestry, game preserves, or other uses.

It is simple enough to indicate what will grow best on various soil-types but the problem has other important angles which must be considered if the results of soil classification are to be of true value. Those undertaking such surveys should know whether pressure for agricultural production or some other consideration is more important than the need for conservation of timber, game, and recreational and other facilities.

Before opening an area for settlemt, the administration of the day should decide what needs will govern in its development. If the decision is wisely taken, much suffering and many disappointments may be avoided. Thousands of abandoned or semi-abandoned farms in the Clay Belt and west of the Lakehead bear testimony to the fact that something more than a capacity to produce farm crops is necessary to maintain settlers on land after it has been denuded of timber. Problems of markets, roads, schools and social life are of paramount importance, and neglect to weight these factors properly can only result in later distress and disillusionment.

Such neglect in the past has resulted in colonist developments sprawled over wide areas, when greater agricultural production, if that was the aim, could have been obtained from a much smaller and more compact area located on more productive soils close to the amenities offered by population centres. One agricultural scientist testified that thirty good farmers located on some of the better soil close to Cochrane could grow more farm produce than is now produced by hundreds widely scattered throughout that whole region.

The same witness pointed out that agricultural soils in Southern Ontario are graded A, B, C, D, E, etc., in conformity with their productive capacity, but in Northern Ontario, while the same system is used, grade-A soil is comparable in productivity only to grade-C soil in Southern Ontario. In other words, the best Clay Belt soils would only rate third class in Southern Ontario where farms in organized communities may be purchased for the value of the buildings upon them, or even for less. If more farm produce is required, it can be obtained more quickly and more cheaply by diverting effort from marginal farmlands to farmlands in Southern Ontario now underdeveloped for lack of farm labour.

The above discussion, I believe, indicates to some extent the responsibility of the administration in opening land for settlement. It should first decide whether or not such settlement is desirable or necessary and, if so, whether agricultural or other considerations should be paramount. Having made these

Rich farming country typical of a large part of Old Ontario.

decisions, the soil expert and the geographer may then be sent in to classify the land on a basis which will ensure satisfactory social and economic results.

It must always be kept in mind that, if soil and topography are suitable, forest lands which have been operated by forest industries may immediately be devoted to agriculture, but the reverse is not the case when lands have been cleared or devastated unwisely for actual or alleged farming pursuits; it may take upward of a century to restore them to their proper use.

The pictures in this chapter graphically portray the long-term possibilities of land classification. Farms of the better type have for generations fed into our national life a stream of citizens of which any nation might be proud. Poorer soils produce citizens who generally deteriorate progressively with succeeding generations to a point where they are problems, not assets, to their communities.

Land classification and description cannot in themsevles change land usage, and sound practices will develop on a wide scale only when a majority of those concerned are educated to a point where they understand the problems posed and endorse the solutions. With this end in view, governments should make educational material available and provide the machinery necessary to implement the action which should be taken.

Without a stabilized policy concerning the opening of lands for settlement and the machinery to implement it, soil specialists, with their economists and map-makers, are working in the dark and subsequent administrative action taken may well nullify their best efforts.

For the future, therefore, I recommend a further tightening of the control over new settlements. If a new area is to be settled, the Government should decide its main purpose and then the soil specialist and others may sensibly prepare the plans upon which it may expand. In this way, the best possible facilities may be provided in the way of roads, schools, churches and integrated community life. Such action would be almost a complete reversal of past processes which tend toward a waste of resources, poverty, disillusionment and, worst of all, a lowering of human morale. Three generations in comparative isolation on unfruitful soil unfortunately seem to raise a high percentage of morons. There is little excuse for continuing to permit people to settle on land which is likely to produce citizens of low quality.

I recommend a Province-wide classification of forest lands, delineating areas as follows:

(1) Soils which under present standards will never be suitable for agriculture and which should be protected from such encroachment.

(2) High-quality, easily developed soils where the topography permits of agriculture and where the climate will normally allow cereals and vegetables to mature.

(3) High-quality soils as in class (2), where climatic conditions normally prevent cereals or vegetables from maturing.

Starvation farming. Poor land-use through attempting agriculture on forest-type land. West of Denbigh, Lennox and Addington County.

(4) **High-quality soils where topography, drainage or clearing problems render them likely to be uneconomic as compared to more favourably situated farms.**

(5) **Marginal soils where some adverse condition, or combination of adverse conditions, makes the success of agriculture doubtful.**

Combined with and superimposed upon the above classifications should be data concerning the possibilities of the development of fish and wildlife or tourist enterprises. Such considerations may radically change the outlook on many marginal sites. It is only by properly weighting all these factors that sensible land-use may be decided upon.

CHAPTER XIX

Forest Communities

Much has been said during recent years concerning the necessity for and possible advantages of forest communities where woods workers could live with their families, or at least be with them at week-ends. It has been suggested that the woods workers of the communities should be employed by local forest industries during a major portion of the time, and that they and their families might cultivate small holdings and during off seasons, engage in fishing, hunting, guiding, handicraft enterprises, or other occupations inherent in forest life, or that these occupations might even form their major source of income.

There is little ground for argument as to the desirability of communities of this nature or that they would probably serve as a potent force in reversing the flow of rural citizens to the larger population centres, a benefit not to be ignored. Each community would help to stabilize woods labour and assure that a nucleus of well trained woods workers would always be available in the vicinity of local forest industry. Pleasant, healthy and gainful occupation would be provided for many, with consequent advantages to both employer and employee alike.

Some of the projects suggested have not dealt entirely in economic realities, and it is unlikely that they could be carried out without loading an unjust burden on the taxpayers.

It has been proposed that each charter member of a community be granted an area of timber land on which he could cut timber for sale to industry. Houses, with modern amenities, would be grouped in villages. Roads necessary for exploiting the area would be developed to open up the various minor watersheds. All members of each family, if they desired, could engage, at least a part of the time, in various enterprises, including handicrafts. A paid manager or overseer would co-ordinate and direct all the enterprises of the community.

In my opinion, this type of forest community can never succeed, for various reasons, some of which are as follows:

(a) The capital cost of houses, roads, schools, churches, communication systems and miscellaneous service would average considerably more than $5,000 per family.

(b) Land-tenure would be an almost insurmoutable barrier, except on a tenant basis. If deeded outright to a member, no matter how careful the initial selection might be, there would be no guarantee that his offspring would desire to lead the same kind of life, or for that matter that he would have male or any descendants of the physique or aptitude for forest enterprise. In such instances, title would necessarily pass to another citizen who might be of a most undesirable type.

(c) The per capita cost of building, maintaining and snow-plowing the extensive road-systems envisioned would be well above the average for rural Ontario because of the greater mileage per family.

(d) The necessary government assistance per worker, in opening up such a community, would amount to more than that given to returning war veterans; this would, I believe, be inequitable and unpopular. The temptation, too, to reduce city relief costs by transferring the recipients to forest communities might well prove too great to be resisted.

I am firmly convinced that the type of forest communities which will succeed will be those sponsored by the operators. They can be strategically placed with reference to watershed development, and may be built by the operator to rent at cost, or co-operatively built, with the operator supplying materials at cost and the individual supplying the labour.

In either event they can be so located that mechanical transport can pick up the workers in the morning and return them to their homes in the evening. (In some locations this may prove feasible only at week-ends.) The advantage of this system is the elimination of many bush camps of the barrack type, with their inevitable colony of clerks, cooks, choreboys, etc. Some of the larger organizations in British Columbia now practice this system to good advantage and with very considerable economy. One operation I visited on Vancouver Island in 1946 maintained in a company-camp at the highway only 60 out of roughly 240 woods employees. Only one cookery and one clerical set-up serviced the whole operation, although cutting was scattered over a considerable area, in some places up to 20 or more miles from the community. The scheme advocated in the final chapter lends itself admirably to a development of this nature.

Whatever the type of the forest community of the future, I believe that the present barrack-type of camp will eventually disappear, except for the housing of seasonal labour whose employment will diminish with the development of communities. **I recommend that operators give thought to building attractive recreation-rooms, with provision for social activities and amenities.** Such recreation-rooms have been provided by many mill organizations in places where the needs are not so great, but their value in maintaining employees' morale has become apparent to senior executives.

Work in the woods can and should be one of the most attractive forms of manual labour. It can be made so if as much effort and imagination is applied to the problem as that applied by competing industries in order to attract workers to urban enterprises.

CHAPTER XX

Comment on Swedish Forestry

A widely held idea persists that conditions affecting forestry in Ontario are similar to those in the Scandinavian countries, particularly Sweden, and that their forest practices could be adopted in Ontario. I wish to dispel this idea; the differences are far more numerous and important than the similarities. They fall under several headings:

(1) In the matter of tenure of lands, over 90 per cent of Ontario's forests are owned by the Crown, while only 20 per cent of Sweden's are in that category and they are located in the more inhospitable climate of the north.

(2) Ontario has an inland continental climate, in contrast to Sweden's maritime weather conditions which more closely resemble the climate in Nova Scotia. Annual precipitation in Ontario and Sweden is comparable, but the distribution of rainfall during the summer months is generally better in Sweden than in Ontario. This, coupled with the higher humidity found in a maritime climate, results in lower fire-hazards than are normal in this Province.

(3) Ontario has seven conifer species reaching maturity over a range of 60 to 150 or more years. Sweden has two conifer species of practically equal maturity-age, one of which, Scotch pine, has not proved satisfactory when attempts have been made to bring it to maturity in Ontario.

Southern Ontario has ten or more native hardwood species of commercial importance, again varying widely in maturity-ages. These reduce to two in number in the more northerly areas. Sweden has only two important hardwoods, birch and poplar, except for a small area in the south where beech, ash, oak and alder are found. Hardwoods are not as widely distributed or as important in the forest economy of Sweden as they are in Ontario.

It can therefore be appreciated that the silvicultural problems posed in developing wise cutting-methods are much more complicated in Ontario than in Sweden.

(4) Sweden has a large number of rivers flowing from her western border to the sea. Nowhere in that country are the forests more than two or three miles from drivable streams which carry the products to tidewater. Ontario is far from having similar conditions; in fact in many areas hauls to drivable water are several times as long as in Sweden.

(5) Sweden has road systems, built over the centuries, which traverse all her forest areas, except the most northerly ones where transportation conditions and, incidentally, forestry methods are not much superior to our own. Ontario needs some thousands of miles of forest roads

before forestry methods on a scale comparable to those practised in Sweden can be attempted.

(6) Sweden has lower woods wage-rates than Ontario where the rates are influenced by and are now equal to, if not above, those paid in mining and the heavy industries generally. Wage rates have a profound effect on the intensity of forest management economically feasible for the operator to remain in business.

(7) Sweden has 90,000 square miles of forest out of a total area of 173,000 square miles, one-third of which is water, rock or bog. Her forest industries employ 94,000 people out of a total population of 6,500,000 and account for 45 per cent of the value of the Nation's exports. As a result, her people are all "forest conscious" and realize that their national life depends upon continuously productive forests. There is no such consciousness in Ontario where a vast majority of the public know little of their forest heritage and are apparently indifferent concerning its future.

(8) The density of the average stand in Sweden's forest areas is nearly ten cords per acre (845 cubic feet) and the annual increment per acre is calculated at 28 cubic feet (just under one-third of a cord). The comparative figures for Ontario are unknown, although it would appear from tests made that a considerably higher annual increment than is mentioned above is possible in the southern portions of this Province.

It must not be supposed that forest practices in Sweden are completely developed and inflexible. Considerable differences of opinion exist there concerning regeneration and cutting practices which are still under development and vary widely between the south and the north. The services of technically trained foresters on both the forest-engineer and the forest-ranger level are much more widely used there than here and their whole administrative set-up is different.

CROWN OWNERSHIP OF MILLS

The Swedish Crown came into possession of several sawmills and a sulphate-pulp mill during the depression years and now owns eleven mills which are operated as joint-stock companies and are required to show a four per cent profit. The extent of its competition with private industry in extracting, processing and marketing forest products is therefore sufficient to act as a finger on the pulse of the market.

CROWN REGULATIONS ON PRIVATE LANDS

The Crown does not interfere directly with the disposal of timber by private owners but, by tradition, there has been some control over cutting extending back, in some cases, well over 100 years. Laws have been enacted:

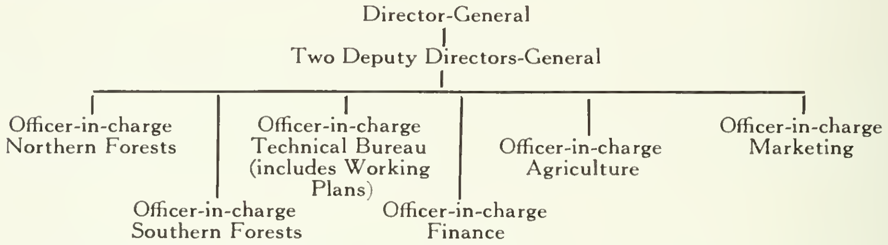
(1) prohibiting the further acquisition of forests by private companies,
(2) prohibiting clear-cutting,
(3) prohibiting measures likely to endanger reproduction, and
(4) protecting the fauna of the forests.

FOREST ADMINISTRATION

The Ministry of Agriculture deals with all forest lands, whether owned by the Crown or by private agencies, except church lands which are not extensive. Administration is under a Director-General who is head of the Royal Forest Department.

Day-to-day problems are managed mainly by semi-independent boards set up by the Ministry. There are two education boards, one which supervises higher forest education and the Forest Research Institute, and the other the intermediate forest schools. Private forestry comes mainly under County Forest Protection Boards, of which there are twenty-five. The work of all these boards is co-ordinated by a central board at Stockholm—The Royal Forestry Board. The Director-General has a seat on all boards, thus assuring their proper interrelationship.

The Royal Forest Department also administers Crown agricultural lands. Its organization is as follows:


Director-General
Two Deputy Directors-General
Officer-in-charge Northern Forests
Officer-in-charge Technical Bureau (includes Working Plans)
Officer-in-charge Agriculture
Officer-in-charge Marketing
Officer-in-charge Southern Forests
Officer-in-charge Finance

Under these officers come 10 territorial conservators and about 110 officers of the superior service, most of whom are in charge of forest divisions or the equivalent. All officers down to and including the territorial conservators are located at Stockholm and set the policy, which is then left for the division officers to carry out with a free hand.

The main purpose of County Forest Protection Boards is to see that farmers' forests are properly managed. Most of the larger companies have their own foresters and manage their forests very well. Some Boards have as many as six trained foresters and three times that number of trained forest rangers, in addition to the seasonal staff. Their duties include marking for felling, giving advice on drainage and road-making, the discouragement of grazing and the operation of nurseries.

The above statistical and administrative data are gleaned from a report made in the summer of 1946 by a group of British foresters, headed by H. G. Champion, C.I.E., Professor of Forestry, Imperial Forestry Institute, Oxford University. This group visited Sweden and travelled widely through the forested areas and visited the forest industries, accompanied by leading experts in the various lines. It is printed in the Empire Forestry Review, Vol. 25, No. 2, 1946.

The vast gap between Swedish conditions and those of Ontario in the matter of making use of trained personnel is readily apparent. It will take several years of maximum enrollment in Canadian forestry colleges if the technical assistance for government and industry in Ontario is to approach, even on a modest scale, Sweden's wide use of trained personnel. Only a start can be considered to have been made in secondary forest schools (ranger schools) with the recent establishment of an initial unit at Dorset. This type of educational institution should be much more widely developed, and this could readily be done in connection with the experimental forest areas recommended elsewhere in this report.

I am convinced that, althought we have not yet trained sufficient foresters to practice management on a level comparable with what is done in the Scandinavian countries, particularly Sweden, it would be wise for us to adopt many of their industrial practices, particularly with regard to mill operation. **I recommend a programme of visits to the mills of Northern Europe during the next few years.** Such visits would be more likely to be productive of conservation measures and economic practices than any attempt to put Scandinavian silvicultural methods into practice in Ontario before we have the necessary personnel. At the same time, only intensive research into the best Scandinavian, German or other continental or American practices which are adaptable to Ontario, will evolve a system more likely to suit our forest conditions than any yet developed.

CHAPTER XXI

Forest Operating Companies

A SOLUTION

Throughout this report there have been frequent references to a plan which would be unfolded in the final chapter. As a preamble, I first deem it necessary to set down certain conclusions forced upon me as the joint result of a widespread survey of field conditions, a prolonged session of public hearings and a critical analysis of the confusing array of existing forest legislation, regulations, agreements, licenses, permissions and permits.

CONCLUSIONS LEADING UP TO SOLUTION OF PROBLEM

(1) I do not consider that it is, or ever will be, possible to achieve the rational development of forest resources or to maintain our present industries under the existing plan of limit allocation, with the confusing and conflicting agreements and conditions in force.

(2) In view of the varying conditions in existing agreements, it never will be possible to apply any over-riding regulations which would standardize them to any considerable degree.

(3) It is not possible for either of the contracting parties to fulfil some of the conditions recited.

(4) Most of the agreements are very one-sided and are indicative of extremely keen bargaining. Export agreements are based on an exception to the general law intended to prevent the very practice provided for in the agreements.

(5) Many people on both sides of the international border believe that there are still vast areas of virgin timber awaiting development. I regret to say that the only area in which I found any considerable quantity of mature timber in blocks of considerable extent, outside areas covered by existing licenses and agreements, is in the Patricia region, north of Lac Seul.

Enough timber for perhaps two moderate-size pulpmills and a few medium-capacity sawmills still remains unleased in that district. (I am presuming the construction of pulp mills by Long Lac Paper Company Limited and Huron Forest Products Corporation in their respective areas.)

(6) I am convinced that unless vigorous remedial measures are soon taken, the lumber industry will continue to diminish in importance to such an extent that before twenty-five years it will be classed as a minor industry, which would be a major tragedy. If this should happen, it will very severely affect every farmer, home-builder, mine, railway or industrial enterprise which uses lumber or timber. A high mortality

rate amongst secondary industries dependent upon sawmills may also be anticipated.

(7) Single purpose operations in our forests should no longer be tolerated. They are a symptom of the absence of co-operative effort between the various groups within the forest industries. The resultant waste is a reproach to all concerned and must be eliminated in any rational development of the forests. The lack of co-operative effort between members of the same group is painfully evident in many cases across the Province.

(8) There is a lack of uniformity in the application of forest regulations and a province-wide indication of insufficient staff to perform the work expected of them.

(9) There is a widespread feeling that some individual operators have been favoured more than others and that departmental action has been slanted to the benefit of some groups. The text of Chapters IX and XV gives substance to complaints on this score.

(10) Except in white pine, red pine and yellow birch stands, there is little overmature timber in the portions of the Province now operated.

(11) I have not heard a word spoken in favour of the Doyle rule, except by those who purchase stumpage from the government or woodlot-owners on that basis.

(12) Throughout this report there have been recommendations concerning the expenditures of considerable sums of money. The purpose of most of this outlay is the rehabilitation of the forests of Southern Ontario which is necessary for the continuity of both rural and urban enterprise. In addition, increased budgets are required to supply the technical and administrative staff, without whom inspection and supervision of Crown lands will not be adequate or efficient.

Unless the public is willing to spend large sums of money on forestry in the next quarter century, efforts toward improvement, or even maintenance, of the present forest conditions will continue to be little better than a gesture. In this connection, the financing of forestry in Southern Ontario should not be confused in any way with the activities on or revenues from Crown lands in other parts of the Province.

In view of the preceding conclusions, I shall now set down certain conditions and principles which I believe should govern any action toward future forest legislation or operational methods. This might form the nucleus of a forest policy for Ontario.

PRINCIPLES APPLIED IN SOLUTION OF PROBLEM

(1) **In future Government action, the principle of sustained yield must ever apply. Any other course will spell eventual disaster to many of our existing industries and the communities they support.**

(2) **Legislation and regulations should apply equally to all operators. There must be adequate penalties, uniformly applied, for evasion of regulations or waste of forest products. On the other**

hand, those operating on sound silvicultural systems should be given every encouragement to develop the highest possible yield from their areas.

(3) In any area cut over, all usable species must be removed to the full extent of the capacity of existing markets to absorb them. Naturally, when available markets cannot absorb the total production of a given species, operations may be concentrated on those stands which may be extracted most advantageously.

(4) Overmature timber must be removed before cutting in younger stands may be permitted. The cutting of small areas of younger, though not immature timber occurring in overmature stands should obviously be permitted, particularly if it will reach overmaturity before the next cutting-cycle.

(5) All cut-over areas must be stocked, either by natural or by artificial means, with a potential stand equal to or better than that removed both as to species and density. Otherwise a continual lowering of the quality of our forests is inevitable.

(6) In the case of other industries such as iron-ore mining, the producer does not quote different selling prices depending upon the ultimate destination of the product, whether it be used for making ploughshares or rails, pen nibs or battleships, but treats all users alike. I consider the Government should similarly standardize its stumpage rates per cubic unit of any given species, regardless of the final disposal of the timber. Natural economic forces would then come into play and the logs or bolts would automatically find their best market.

(7) I am certain that the method of levying government charges on forest operations could be simplified and improved. I recommend that, instead of several different assessments, only two be applied.

One of these, which might be termed "forest rental", would cover all items of expense which continue regardless of the size of the annual cut. It would include the revenues necessary for the maintenance of staffs at Headquarters and in the field, together with the cost of their various activities such as research, forest protection (including fire fighting), air service, etc. Needs could be estimated with accuracy and rentals set for a period of five or more years. I suggest that any portions of the estimated fire fighting costs remaining unexpended in a particular year should be carried forward to succeeding years within the period, as a cushion against disaster. At the end of the period a rebate should be made or, if a deficit exists, the assessment for the ensuing period should be raised to reimburse the Treasury.

The other charge might be called "stumpage" and would include government revenue for timber cut and all items dependent upon the quantity of wood cut. Zones of special stumpage rates could, if necessary, be established to take care of wide differences in operating conditions or for other reasons such as Government tolls on roads or for other improvements constructed for limit holders at public expense. Variations of this kind should only be permitted on the broadest possible basis, such as differentiating between timber on watersheds draining into the Great Lakes and timber on watersheds draining into James Bay or Hudson Bay, with no effort made to adjust differences between individual stands or operators. Endless argument and inconsistencies would result if the basis were to be narrowed.

Stumpage rates could properly be raised or lowered in conformity with the economic cycle applying to forest industries. I see no reason why industries, which in past times of stress have applied for and received rate-reductions from the Department, should not, within reason, share periods of prosperity with the same Department. There are sound arguments for raising provincial charges on timber in times of high federal taxation on industrial profits. While there is no quarrel with the idea that the Federal Government should derive such benefits in wartime, I point out that low provincial stumpage rates are reflected in enhanced federal revenues from taxes on profits and excess profits.

(8) I recommend that all wood, whether logs or bolts, be measured on a cubic measurement basis. The Doyle rule has really only one purpose, that of confusing the seller, and elastic contents of cords have no place in a well ordered system of measurement. For four-foot wood, a cord 4′ x 4′ x 8′ could be converted on a basis of 88 cubic feet if the wood is unbarked and 104 cubic feet if barked.

(9) Speculation for profit on timber stumpage should be eliminated. Limit holders with a surplus of wood beyond their needs should be required to dispose of such wood at the government dues applying, plus a fair return for carrying charges, say five cents per acre per year, or a maximum of one cent per cord or its equivalent per year, during the time ground rents, fire protection, etc., have been paid. Such a regulation would confine corporations to a profit on the manufacture of their products and prevent any on timber speculation.

(10) The amount of the export levy should be whichever is the greatest of:

(a) $2.00 per cord, or

(b) The difference between the average cost of United States wood delivered to the United States mill and the declared cost of the wood imported from Ontario delivered to the said mill, or

(c) The difference between the average cost of United States wood delivered to the United States mill and the average cost of Ontario wood for domestic consumption, plus export profit (as mentioned later), plus the freight to the United States mill at published rates.

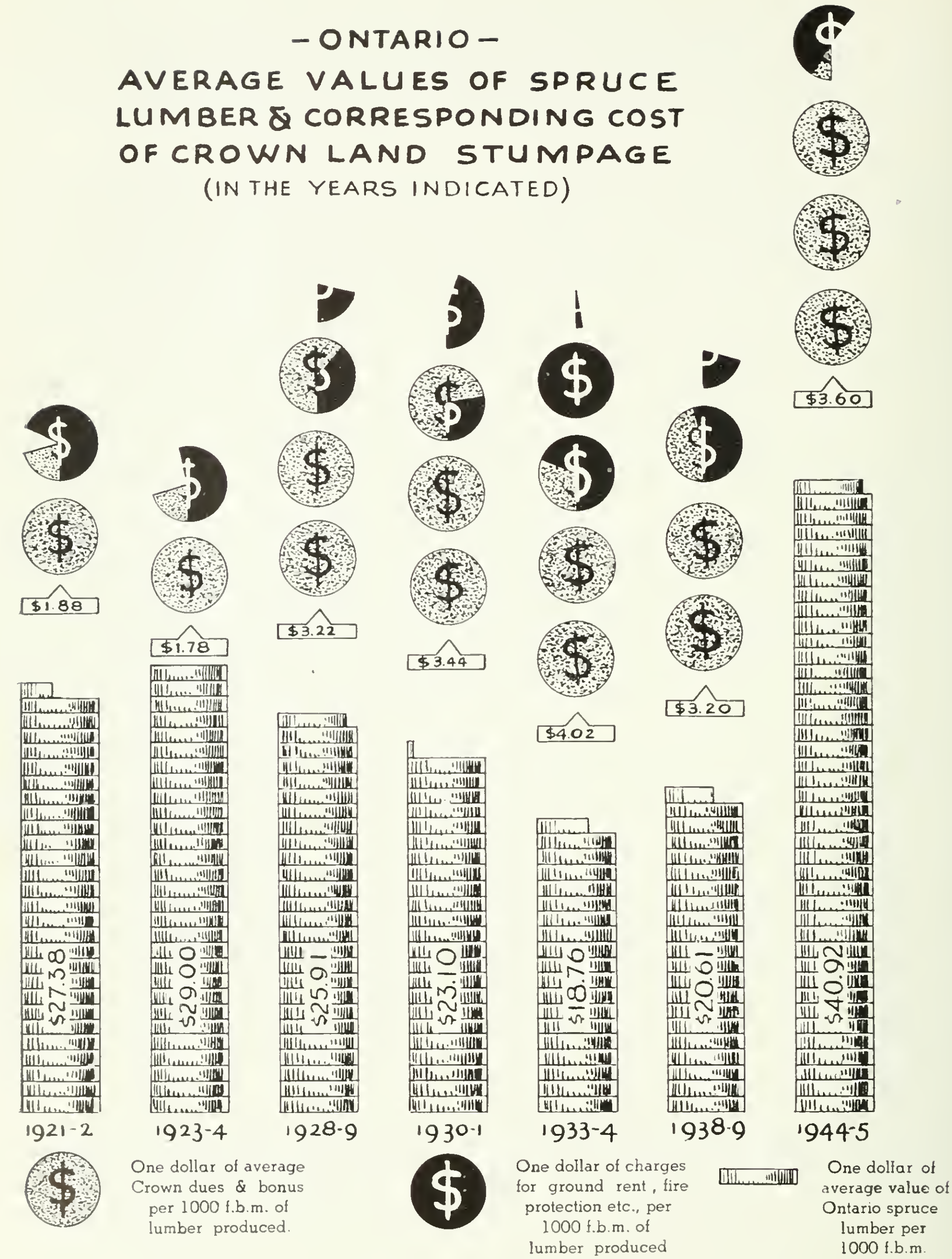


Chart showing a comparison of lumber values and stumpage costs of spruce in Ontario in certain significant years.

A memorandum submitted by a representative of the importing mills in the Lake States indicated that Canadian wood is desperately needed for the mills in question. There was no hint that this wood should be delivered more cheaply than home-grown wood.

(11) Each area must be developed to its full growth capacity, with cutting confined to the older stands, except under unusual circumstances such as insect epidemic or fire loss. An operator who holds more limits than his mills require must operate the limits to their full capacity for regrowth. On the other hand, an operator must not cut more than the annual growth on his limits. Until better standards are developed, the cut in coniferous stands on watersheds draining into the Great Lakes should not exceed 10 cubic feet per acre per year and in mixed stands five cubic feet of conifers and five cubic feet of hardwoods. On watersheds draining north or west, the cut should not exceed nine cubic feet per acre per year.

ADVISORY COMMITTEE TO MINISTER

It is submitted that any legislation or any forest policy, no matter how sound and workable, can be nullified by Government or Ministerial action. Many submissions presented at the public hearings recommended the formation of a Commission which would be above politics and which would provide continuity and impartiality to forest policy.

I am far from convinced that Commissions are infallible or that their members can survive unless their policies are essentially in conformity with the view of the administration. Experience of Hydro Commissions in Ontario and Quebec during the past 10 or 12 years would indicate the fallacy of the impression of continuity. After all, the administration of the day is responsible for the care of provincial resources and it cannot escape its responsibilities for the forests by delegating matters of policy and management to a non-elective Commission.

There is little assurance that a Commission, however carefully selected or well intentioned, will solve all its problems correctly. As an example, I might mention the fact that the Workmen's Compensation Boards of Ontario and Quebec follow diametrically opposed policies concerning merit and demerit rates for good or bad accident experience, although such rating embraces one of the main fundamentals of accident prevention.

I am very firmly convinced that public interest will best be served by the departmental system under a Minister responsible to the people. I am just as firmly convinced that measures should be taken to prevent a Minister from reversing existing forest policy or promulgating new policies and only informing the general public several years later.

To indicate the need for some type of check I point out that such policy-reversing changes have occurred in the past without the general public being aware of them for several years. It is difficult to take suitable remedial action in such matters when they appear in a departmental annual report sometimes three years after the event.

In order to provide reasonable continuity of forest policy when changes of government, or even changes of Ministers, occur and to

guard against possible unwise or precipitate Departmental action, I recommend that an Advisory Committee to the Minister of Lands and Forests be appointed. Its membership should consist of one representative of each of the following groups or interests:

Education
Railways
Labour
Forest engineers
Pulp and paper industry
Lumber industry
Mining
Building industry
Finance

This Committee, which should have a permanent secretariat, should hold periodical meetings, probably monthly, for which members would be paid fees commensurate with directors' fees paid by large industrial corporations. At these meetings, or at special emergency meetings, the Minister may lay any problems, on which he wishes advice, before the Committee. Conversely, members might ask for explanations of any Departmental action taken or contemplated. The Minister need not necessarily accept the advice of the Committee, but could receive much benefit from their discussion of and reaction to any major projects he might have under contemplation.

A group of the nature outlined would bring a wide cross-section of business and professional experience to the service of the Minister and would, I believe, achieve that continuity of policy so widely desired and advocated. Appointments might be arranged so that three members would retire each year, although any member so retiring might be re-appointed if such action was agreed upon by the Government and the group concerned. Practically all groups represented have associations which could nominate suitable candidates for membership. The representative of education could properly be the Dean of the Faculty of Forestry at the University of Toronto.

If stability and continuity of forest policy is assured through the appointment of a Committee of the nature described, then I recommend that the Government of the Province should adopt a completely new concept of the allocation and operation of Crown lands. Unless a reallocation of cutting rights of the nature outlined is adopted, I am convinced that the present unbalanced and wasteful system of exploitation will cause a continuous and progressive deterioration of forest resources. Only a major reversal of existing policies can supply a remedy.

I consider that any attempt to provide a solution by applying new regulations to the infinite number of conflicting conditions in present agreements is doomed to failure. No partial solution can meet the needs of the situation. Half measures can only postpone the evil day; I therefore offer none.

There are those who will point out that dire prophecies concerning the exhaustion of forest resources have been made over a long period of years and that they have all grossly exaggerated the situation. In reply to those critics, I would point to the decline of the lumber industry and the expansion of the pulp and paper industry to our westerly boundary and into the smaller timber in the northern areas along the timber line. The last forest frontiers are now well in sight from present holdings and no new horizons will develop. Expansion of forest holdings is coming to a close, and I hope we are now entering the era of sensible operation of our remaining resources.

My proposal is as follows:

All licenses, agreements, permissions and permits shall be suspended for a period of not less than ten years. In return, the Government will assure to the present limit holders a supply of wood in perpetuity up to the present capacity of all domestic mills by a pooling of the resourses of all provincial Crown lands and by establishment of a policy which will allow further expansion only when it has been established beyond question that wood is available without possibility of interference with domestic enterprises. Future extensions, commensurate with the productive capacity of the tributary forests, will be provided for, if justified, as soon as the true capacity can be ascertained. Exporters will receive quantities of wood commensurate with the productive capacity of their present limits, but not necessarily from the areas their agreements now cover. **I recommend that no export be permitted from an area which will prejudice the continued economic life or legitimate expansion of any domestic enterprise.** There is, however, enough material for all, including sawmills and exporters, if it is properly harvested and distributed.

I contend that an assurance of standing timber in perpetuity is of more value to a limit holder, for purposes of financing, than his present insecure tenure under legislation which is now in the Statutes of the Province.

All Crown forest resources having been pooled, their sensible redistribution becomes simple and the major defects of the present system can be eliminated. I suggest that the Province be broken down into 12 areas along the lines generally indicated on Map No. 6. The areas shown are only indicative and may be varied very considerably, not only with regard to boundaries but also in numbers, without seriously affecting the soundness of the scheme.

FOREST OPERATING COMPANIES

Of the areas indicated on Map No. 6 each contains several watersheds and parts of watersheds and in general supplies a central group of forest industries. Watersheds from which the wood will be delivered by rail are integrated with adjoining watersheds. Individuals or corporations, who hold limits or operate mills using the various forest products, would unite to form one Forest Operating Company in each of the areas shown. This would combine and co-ordinate all woods operations carried on within the area for any purpose whatsoever.

I believe that the right of the individuals and corporations concerned to purchase wood from the Operating Company should depend upon the holding of shares in that Company and that the quantity of such wood should be in proportion to the number of shares held.

ALLOCATION OF SHARES IN FOREST OPERATING COMPANIES

It is unnecessary to work out here all the details of the organization of these Forest Operating Companies but shares, with the ancillary right to purchase wood, could be allocated on a combination of two factors:

(a) Average mill consumption or export shipment in units of wood by each individual or corporation over a five-year period or, in the case of mills which have not operated for a total of five years, average annual consumption.

(b) Area of limits now held by the individual or corporation within the watersheds included.

Allocation of shares and wood entitlements to each unit of industry concerned is entirely feasible and equitable on the above basis. Such allocation will smooth out differences and eliminate unsound forest practices such as over-cutting by mills too large for the limits which supply them, or under-cutting on limits left partially dormant because they are too large for the mills they supply.

Shares should carry a fixed dividend which would be a charge against the wood cost. Payment for shares could be made in cash or by shareholders turning over to the Operating Company their equipment, camps, improvements, surveys, working plans, etc., all of which would necessarily be evaluated on a standard basis by a referee or board of referees.

EXPANSION OF FOREST INDUSTRIES

No new industries or expansions of existing industries beyond those already under way should be permitted until it is ascertained that there is sufficient wood available to justify such expansion. When it becomes apparent that there is a surplus of wood over current needs in any Forest Operating Company's area, the surplus could be allocated by the Department of Lands and Forests to the industry which will provide the utmost in continued employment in the vicinity or, if necessary, could be diverted to some other Operating Company in whose area a shortage of wood was found to exist. The allocation of surplus wood should naturally be carried out after consultation with the industries concerned and I can see where the Advisory Board to the Minister could be of great value in advising on these allocations or dealing with complaints which will be inevitable where large quantities of forest products are concerned.

If the right to purchase wood from the Operating Company is to be dependent upon the holding of shares, provision will have to be made for the compulsory sale of shares, at a fixed price, by individuals or corporations which cease to utilize, for a period of say two years, the quota of wood to which they are entitled.

PROVINCIAL REPRESENTATION ON BOARDS OF DIRECTORS

The Forest Operating Companies would be managed and administered by boards of directors. **I strongly recommend that the Province should have a representative on the board of each such Company.** It is realized that having a member on such a board might lull the public into a false sense of security but I believe that the over-all advantages of such representation more than overbalance the disadvantages. In any event, the scheme is entirely feasible without government representation on the board.

I would further suggest that the other members of the directorate should be appointed from the various groups represented on the following basis:

(a) Where pulpwood-using industries have consumed the bulk of the wood produced in the preceding five years:

Pulp and paper mill group	2 directors
Sawmill group	1 director
Pole and tie operators' group	1 "
Exporters' group	1 "
Small operators' group	1 "

(b) Where sawmill operators have consumed the greater part:

Sawmill group	2	directors
Pulp and paper mill group	1	director
Pole and tie operators' group	1	"
Exporters' group	1	"
Small operators' group	1	"

With such representation for the various interests, no particular group would be able to dominate the situation. Directors, as soon as elected, could proceed to select operating officials from amongst the best of the personnel of all the groups represented, and actual forest operations could then be undertaken.

OPERATING CONSIDERATIONS

In the initial stages of the Forest Operating Companies, cutting would probably proceed in the same areas from the same camps and with much the same personnel, and changes would gradually be undertaken over a period of several years. It is emphasized that Forest Operating Companies could, and probably would, use contractors, company camps with small operators, or even allot to families small watersheds to cut over where circumstances so dictated, and that the system used would be governed by a combination of the social, silvicultural and economic considerations.

Consideration might well be given to the question of providing compensation to limit holders for ground rent and fire protection charges paid in past years on limits turned over to the Operating Companies.

Preparation of a long-term working plan would be a responsibility of the company, to be completed within three years. Approval of this working plan by the Department of Lands and Forests would be necessary before its adoption.

All Forest Operating Companies should be required to organize along similar lines and all data and returns concerning the forests would be standardized to the fullest possible extent, eliminating the present difficulty encountered in trying to assemble comparative data between regions or operators.

If, after a reasonable period of trial, say ten years, the original limit holders should wish to return to the present uneconomic and unorthodox conditions of forest operation, the question could be studied in the light of intervening experience. If, on the other hand, any limit holder for selfish or contractual considerations, should refuse to enter into the project, the Department has sufficient authority written into his present agreement to ensure the operation of the limits involved to their full capacity and on sound forestry principles requiring the use of each type of timber for its most appropriate purpose. Priority in the use of waterways for wood transportation and in similar rights should be allotted to Forest Operating Companies, in view of their greater importance in the economic well-being of the Province.

ADVANTAGES OF PROPOSAL

At this point, the advantages of the above proposal begin to emerge. Not the least of these would be the emancipation of forest operation from the shortsighted policy of many mill executives who normally know little or nothing of the inescapable effects of unsound forest practices and are mainly concerned with immediate costs. Forest utilization would be conducted under the ablest and best trained woods personnel available within the various groups. Cutting would be carried out in conformity with plans prepared in collaboration with foresters who would protect against jeopardizing future forest conditions for the sake of present dividends.

Mill executives would only need to calculate their wood requirements and send a requisition to the Forest Operating Company, in which they hold an appropriate share. Tentative requisitions for raw material could be made as of January 1st in each year, to permit the Company to plan its season's work. Final requisitions could be made, with the necessary financial adjustment, at August 1st. I would suggest provision of working capital for the Company by means of monthly advances by the operators at agreed rates, say $1.00 per cord per month, commencing with the placing of the tentative requisition.

As soon as tentative requisitions are placed, the Forest Operating Company could arrange its season's work to best advantage, purchasing supplies and equipment, opening secondary roads, clearing streams, etc.

When cutting starts, the needs of each type of industry would be integrated to the operation of each section of the forest. Materials suitable for poles and ties, sufficient to meet the needs, would be cut into suitable lengths for that purpose. Only straight logs in the larger sizes would be allotted to sawmills. The vexed question of the definition of a sawlog would be solved. It is my belief that nothing under 10 inches small-end diameter need be diverted to sawmills in order to maintain present production. However, if that estimate should prove inadequate to meet needs, the minimum diameter could be dropped to nine inches. If it gave indication of providing an excess over the needs for sawlogs in any area, the diameter could be raised to 11 inches. The situation would thus be always under complete control.

Jack pine could be diverted to kraft mills and to sawmills. Spruce, balsam and jack pine could go to the pulp and paper mills in the proportions which they can utilize. Poplar would go to soda-pulp mills, groundwood mills and sawmills, and so on.

PRIORITY TO DOMESTIC MILLS

Priority in regard to timber in any area should go to domestic mills. If a company has insufficient growing material to feed its mills in perpetuity, it may call on an adjoining Forest Operating Company which has more than its domestic demand. When better silvicultural measures restore the local balance, a readjustment may be made. When domestic mills are assured of supplies in perpetuity, then there can be less argument against the export of pulpwood within the annual growth of the Province, provided always that the product manufactured from the exported pulpwood is not competing in the market of domestic mills, or robbing them of a future economic source of wood supply.

Operating Companies should deliver wood to their own domestic mills at cost (which would include the fixed dividend on stock). Wood produced for other Companies should be permitted to carry a nominal profit over the cost to domestic mills of possibly 50 cents per hundred cubic feet, and wood produced for export should carry a higher rate of profit, possibly $1.50 per hundred cubic feet.

PROFITS FROM MANUFACTURING PROCESSES

The duty of the Forest Operating Companies would lie in delivering ample and suitable wood to domestic mills at the lowest possible cost commensurate with sound forestry practice. Profit making by the member companies would result from the efficient conversion of this wood to its various end-products, rather than from luck or influence in the allotment of their limits, or from high-grading or otherwise abusing the Province's resources.

JOINT DRIVING OF STREAMS

The sorting of logs, except for species, would be eliminated and drives on streams would all be joint drives. The significance of this statement will be realized when I mention that this co-operative idea would do away with ten out of the eleven sweeps or rears annually carried out on the Nipigon River.

COMPARISON OF COSTS

Comparison of wood production costs could be made by a central organization, such as the Ontario Forest Industries Association. It could tabulate the costs from the various Forest Operating Companies, which would be kept in a standard manner, and this information could be circulated periodically to all companies. Costs out of proportion to the conditions prevailing would become apparent and the companies could take appropriate remedial action.

OVERLAP AND DUPLICATION ELIMINATED

Overlapping in purchasing, storekeeping, accounting, engineering and administrative effort generally would be eliminated. Central repair shops and wood-working plants equipped with the most efficient machinery, and staffed by highly skilled mechanics, would be feasible. Reserves of equipment, stores, food and fodder could be drastically reduced and handled in a more scientific and economical manner than is now the case.

LABOUR CONSIDERATIONS

Labour Unions would find their problems simplified in having a smaller number of large operators to deal with in negotiating collective agreements and should find it much easier to service such agreements than under present conditions. The hiring of men would also be simplified through central agencies who could hire large numbers and dispatch men in special trains at excursion rates, instead of continuing the present piecemeal practices.

NEW AND DORMANT LIMITS DEVELOPED TO CAPACITY

The proposed scheme would bring into active production millions of acres of forest lands belonging to the Crown, but not included in existing licenses and agreements. Many of the areas are in themselves too small or too remote from population centres to attract industry to them under the present limit-allocation plan, but would fit admirably into the broader scheme of operations suggested in this chapter. A glance at Map No. 8 indicates the locations of the areas mentioned above.

JOINT TOWING OPERATIONS

The Forest Operating Companies whose products are delivered to the Great Lakes should form a Great Lakes Towing Company which would organize and carry out the movement of wood on the Great Lakes. This would completely integrate the movement of wood from stump to mill and eliminate overlap in effort and duplication of services and equipment.

GOVERNMENT ADMINISTRATIVE ADVANTAGES

From the standpoint of government administration, the proposal would eradicate nearly all of the detail work which is now most troublesome and time-consuming. Instead of hundreds of operators, they would be dealing with about a dozen. Stumpage rates and operating regulations would be standard across the Province, instead of being fogged with hundreds of varying conditions as at present. The boundaries of the Forest Operating Companies' areas and the administrative districts of the Department could be made to coincide so that each district office would have to deal with only one or at most two companies. Accounting need not lag more than a week or two behind the scaling of wood and the recording of stumpage dues or other forest charges. The result would be that figures necessary for the preparation of the annual report of the Department could be available within a month of the date decided upon as the end of an operating year.

The greatest and most lasting effect of the proposed scheme, however, will be derived from the full and rational development of each forest area along sound silvicultural lines. Timber removal will be from limits which should logically be cut over, rather than from areas dictated by limit lines or individual company policy.

POSSIBILITIES

Both the Government and limit holders are justified in asking what are to be the benefits of such a radical change of method in the treatment of Crown lands and their development.

With the fusion of all groups and with management controlled by the most efficient operating personnel available, all woods operations should be raised to a standard comparable with the best carried on previously. There are enough efficient operators to supply this leadership. Superimposed on the general increase in efficiency of operation, will be the savings from the elimination of separate drives and duplication in management, supplies, maintenance and repair of equipment, engineering and items of a similar nature.

Judging from the waste of effort and material which I observed on widely distributed operations, I am convinced that if the system advocated is adopted, the average cost of delivered raw materials can be reduced by the equivalent of $2.00 per hundred cubic feet, without any reduction in wages. This would save some $6,000,000 per year for forest operators generally. For the sawmilling group, costs of sawing would be reduced by at least $3.00 per M feet board measure, due to the elimination of small, crooked and defective logs; while average grades of lumber produced would be raised by $5.00 to $6.00 per M feet board measure, a further benefit of $1,500,000 or $2,500,000, a generous portion of which should be passed on to the public.

But the above more or less immediate benefits do not create the main value in the scheme, which lies in an increased production from our Crown lands, with an improvement rather than a deterioration of the forest resources involved.

The Report of Forest Resources of Ontario compiled in 1930 indicates 110,000,000 acres under forest protection. Of this:

(1) 39,450,000 acres were classed as muskeg, barrenland, water, or recent burn,
(2) 28,110,000 " " " coniferous stands,
(3) 34,460,000 " " " mixed stands,
(4) 7,980,000 " " " hardwood stands.

The following estimates are extremely conservative, as I have not taken into account any growth on item (1) above; I have assumed a growth of 10 cubic feet per superficial acre on watersheds feeding the St. Lawrence drainage, Rainy Lake, and Lake of the Woods; I have used a figure of nine cubic feet per acre for the Central Divide (height of land) area, except its Kenora extension; and for the Clay Belt and Kenora extension of the Central Divide, I have used seven cubic feet per acre per year, not so much because of a difference in the rate of growth, as because of the amount of marginal forest land, the stands on which are of doubtful economic value.

Mixed stands have been estimated to produce equal quantities of softwoods and hardwoods, and hardwood stands have been estimated to produce 10 cubic feet per acre per year, except in the Clay Belt and the Kenora extension of the Central Divide, where 9 cubic feet is the figure used.

The above figures are roughly one-third of the average applied to Swedish forests, and less than one-quarter of that taken from German forests.

Applying the above figures, I find that an annual cut properly distributed over our Crown lands could amount to 391,800,000 cubic feet of conifers and 247,100,000 cubic feet of hardwoods.

Assuming 25 per cent of the above conifer cut would be suitable for sawlogs, and 15,000,000 cubic feet suitable for ties and poles, we could produce annually the following:

540,000,000 f.b.m. lumber,
2,000,000 ties,
250,000 poles,
3,200,000 cords of pulpwood or other products.

Assuming 15 per cent of all hardwoods would be suitable for lumber, we could produce the following annually:

185,000,000 f.b.m. lumber,
10,000,000 cubic feet veneer-logs, poles, ties, etc.
1,500,000 cords of pulpwood,
770,000 cords of fuelwood and other products.

In addition to the above, there are now roughly 41,000,000 f.b.m. of lumber and 180,000 cords of pulpwood produced annually on private lands and this could be stepped up to 110,000,000 f.b.m. and 300,000 cords, if the plans suggested are carried out.

RECAPITULATION

	(1) Present Production (average) Crown lands and private lands	(2) Possible annual cut (1950)
Lumber	600,000,000 feet board measure	835,000,000 feet board measure
Pulpwood	2,180,000 cords	5,000,000 cords
Ties	1,500,000 pieces	2,0000,000+pieces
Poles	125,000 pieces	250,000+pieces
Veneer-logs, etc.	4,000,000 cubic feet	10,000,000 cubic feet
Fuelwood	1,885,000 cords	2,500,000+cords

Tremendous overcutting of firewood is occurring on Ontario's private woodlots; if they are not to be more or less completely ruined, most of the fuelwood used in the next few decades must come from Crown lands, sawmill waste, etc.

As indicated in Chapter VI on Private Lands, a continually increasing quantity of wood from that source is feasible and this, added to the increased cuts later possible on Crown lands as a result of better cutting methods, will provide a substantial addition to the figures in column (2) above.

The possibilities outlined above, together with the human values which may be perpetuated and enhanced as a result of adopting the proposed scheme of management and operation of Crown lands are, I believe, too great to be pushed aside because of selfish considerations. Perpetuation and improvement of our forests, together with their dependent industries and all the secondary benefits of tourist attraction, recreation, control of stream flow, maintenance of water levels, increase in fish and wildlife, are all within our grasp if we have the courage to reach out and seize them.

I maintain that this proposal is not visionary. It is practical and based on sound principles and common sense. To those who are well satisfied with forestry matters as they are, it may come as a shock. I believe that such people need a shock. After an exhaustive study of prevailing forest conditions, I am convinced that it is necessary to protect a probable majority of operators against their own folly in wasting forest resources which are the life blood of their industries. **I therefore recommend that the principles, if not the details, be adopted.**

APPENDIX A—IDENTIFICATION OF SUBMISSIONS

The following is a list of the briefs presented before the Commission:

Name	Address	Read by
Ontario Provincial Government Departments		
Department of Lands and Forests	Toronto	
Deputy Minister (F. A. MacDougall)		J. F. Sharpe
Accounts, Division of		
General		J. G. McMillen
Timber Acconnts		P. B. McLaughlin
Land Tax		Geo. Hinton
Air Service, Division of		G. E. Ponsford
Fish and Wildlife, Division of		Dr. W. J. K. Harkness H. H. MacKay L. L. Snyder Prof. A. F. Coventry
Forest Protection, Division of		T. E. Mackey
Land and Recreational Areas, Division of		F. J. Sullivan
Law, Division of		F. J. Sullivan
Operation, and Personnel, Division of		P. O. Rhynas
Reforestation, Division of		E. J. Zavitz
Tree Seed Extracting Plant		R. W. Carman
County Forests		A. B. Wheatley
Farm Woodlots		I. C. Marritt
Research, Division of		R. N. Johnston
Forest Regeneration		A. P. Leslie
Soil Survey		G. A. Hills
Surveys and Engineering, Division of		F. W. Beatty
Timber Management, Division of		J. F. Sharpe
Department of Planning and Development	Toronto	A. H. Richardson
Federal Government Departments		
Department of Agriculture (Science Service, Division of Botany and Plant Pathology)	Ottawa	A. W. McCallum
Department of Agriculture (Science Service, Division of Entomology)	Ottawa	Dr. M. L. Prebble
Department of Mines and Resources		
Dominion Forest Service	Ottawa	D. A. Macdonald
Forest Products Laboratories	Ottawa	T. A. McElhanney
Forest Insects Control Board	Ottawa	E. J. Menard
National Research Council (Subcommittee on Forest Tree Breeding)	Ottawa	J. L. Farrer
Cities, Towns, Municipalities and Counties		
Fort Frances, Mayor of Town of	Fort Frances	[1]
Geraldton, Corporation of Town of	Geraldton	W. F. Draper
Haliburton, Provisional County of	Minden	Mr. Rogers
Halton County	Milton	[1]
London, Corporation of City of	London	Mayor F. G. McAllister
Mining Municipalities of Northern Ontario, Association of	South Porcupine	V. H. Evans
Peterborough County Council	Peterborough	M. H. Johnston
Port Arthur, City of	Port Arthur	Mayor C. W. Cox
Renfrew County Council, Reforestation Committee of	Pembroke	H. J. Chapeskie
Waterloo County Council	Waterloo County	Mr. Huehn
Boards of Trade and Chambers of Commerce		
Alexandria Board of Trade	Alexandria	D. A. McDonald
Eastern Ontario Associated Board of Trade and Chambers of Commerce		D. A. McDonald
Port Arthur Chamber of Commerce	Port Arthur	G. H. Young
Port Arthur Junior Chamber of Commerce	Port Arthur	K. Dennis
Sault Ste. Marie Board of Trade	Sault Ste. Marie	H. N. Anderson
Smiths Falls Chamber of Commerce	Smiths Falls	D. A. McDonald

Name	Address	Read by
Political Groups		
Co-operative Commonwealth Federation (C.C.F.), Ontario Section of the		
Brief	Toronto	F. O. Robinson
Supplementary Brief	Toronto	C. L. Coburn
Labour-Progressive Party, Ontario Committee	Toronto	R. Stevenson
Public Utilities		
Bell Telephone Co. of Canada	Montreal	H. F. Bush
Canadian National Railways, Tie and Timber Department	Montreal	[1]
Canadian Pacific Railway Company, Purchasing Department	Montreal	L. E. Peever
City of Port Arthur, Public Utilities Commission	Port Arthur	R. B. Chandler
The Hydro-Electric Power Commission of Ontario	Toronto	Dr. O. Holden
Trade Associations and Trades Unions		
Canadian Lumbermen's Association	Ottawa	W. J. LeClair
Canadian Manufacturers' Association, Ontario Division	Toronto	Thomas E. Boyce
Canadian Pulp and Paper Association		
Brief	Montreal	R. M. Fowler
Supplementary Brief	Montreal	[1]
Fort William Trades and Labour Council	Fort William	J. Currie
Furniture Manufacturers' Association	Toronto	C. V. Fessenden
International Brotherhood Pulp, Sulphite and Paper Mills Workers (Local No. 92)	Fort Frances	T. A. Gladu
Lumber and Sawmill Workers' Union No. 2995	Timmins	B. A. H. Magnuson
Ontario Forest Industries Association	Toronto	C. R. Mills
Ontario Mining Association	Toronto	N. F. Parkinson
Ottawa Retail Lumber Dealers Association	Ottawa	P. T. Davis
Wholesale Lumber Dealers Association Inc.	Toronto	H. J. Luck
Conservation, Recreation, and Professional Associations		
Canadian Forestry Association Inc.	Montreal	Robson Black
Canadian Society of Forest Engineers		
Northern Ontario Section	Kapuskasing	E. Bonner
Northwestern Ontario Section	Port Arthur	E. H. Reeves
Ottawa Valley Section	Ottawa	W. M. Robertson
Southern Ontario Section	Toronto	Mr. Thompson
Federation of Ontario Naturalists	Toronto	Prof. T. F. McIlwraith
Hunting and Field Archers of Ontario	Toronto	R. J. Mitchele
Men of Trees	Toronto	[1]
Ontario Conservation and Reforestation Association		
1 Brief	London	Watson Porter
4 Briefs	Ottawa	H. S. Arkell T. A. Dolan
Ontario Federation of Anglers and Hunters	Toronto	Dr. A. B. James
Ontario Horticultural Association	Guelph	J. E. Carter
Parks and Recreation Association of Canada	Niagara Falls	J. Pearson
Thunder Bay District Fish and Game Association	Fort William	[1]
Toronto Anglers' and Hunters' Association, Inc.	Toronto	F. H. Kortright
Educational Bodies		
Ontario Agricultural College, Department of Soils	Guelph	Dr. G. N. Ruhnke
Sault Ste. Marie Board of Education	Sault Ste. Marie	J. S. Foulds
University of Toronto, Faculty of Forestry (3 Briefs)	Toronto	Dean G. G. Cosens Prof. T. W. Dwight R. C. Hosie
Agricultural Organizations		
Cedar Hill (S.S. No. 8) Farm Forum	Cedar Hill	S. Fulton
Lanark County Federation of Agriculture		A. E. Blair

Name	Address	Read by
Miscellaneous Organizations		
Lumber and Pulpwood Operators and Producers of other Forest Products of Cochrane Area	Cochrane	A. E. Wicks
Northern Outfitters' Association	Sudbury	J. A. MacNab
Ontario Command, Canadian Legion B.E.S.L. (2 Briefs)	Toronto	W. T. Burke
Quetico-Superior Council	Minneapolis, Minn	E. C. Oberholtzer
Rehabilitation Council of City of Owen Sound (3 Briefs)	Owen Sound	Dr. N. Douglas
Toronto Convention and Tourist Association	Toronto	T. H. R. McNally
Corporations other than Public Utilities		
Canadian Splint and Lumber Corp. Ltd.	Pembroke	W. R. Beatty[3]
Consolidated Paper Corp. Ltd	Pembroke	W. R. Beatty[3]
Dominion Cellulose Limited and National Cellulose Company Limited	Toronto	W. S. Gibson
Eddy Company, E. B.	Hull, Que.	J. W. Paterson
Hammermill Paper Company	Erie, Penn.	M. Cochran
Hard Rock Gold Mines Limited	Geraldton	A. E. Cave[3]
Howard Smith Paper Mills Ltd.	Montreal	[1]
Kemp Edwards Ltd., D.	Ottawa	[1]
Little Long Lac Gold Mines Limited	Geraldton	A. E. Cave[3]
MacLeod-Cockshutt Gold Mines Limited	Geraldton	A. E. Cave[3]
Magnet Consolidated Gold Mines Limited	Geraldton	A. E. Cave[3]
Marathon Paper Mills of Canada Ltd.	Marathon	H. P. Klinestiver
Milne & Sons Limited, William	North Bay	D. W. Milne
Mountjoy Timber Co. Limited	Timmins	J. A. K. Reid
Newaygo Timber Co. Limited	Port Arthur	H. S. Mosher
Northern Paper Mills Ltd.	Green Bay, Wis.	A. K. McNaughton
Northern Wood Preservers Ltd.	Port Arthur	R. J. Prettie
Pembroke Shook Mills Ltd.	Pembroke	W. R. Beatty[3]
Pigeon Timber Co., Ltd. and Great Lakes Lumber and Shipping Ltd. (Brief and Supplementary Brief)	Fort William	E. E. Johnson
Pulpwood Supply Co.	Long Lac	A. F. Buell
Twelve Producing Gold Mines in Kirkland Lake and Larder Lake Area	Kirkland Lake	A. Harris
Upper Ottawa Improvement Co. Ltd.	Ottawa	D. A. Gillies
Whitmore Lumber Co., W. N.	Deux Rivieres	[1]
Individuals		
Avery, B. F.	Espanola	[1]
Bawden, H. N.	Toronto	H. N. Bawden
Clark, Donald A.	Port Arthur	D. A. Clark
Cox, Charles W.	Port Arthur	C. W. Cox
Crossley, T. Linsey	Toronto	T. L. Crossley
Dennison, William	Toronto	W. Dennison
Dexter, J. M.	Burritts Rapids	[1]
Douglas, Thomas O.	London	T. O. Douglas
Eckardt, Dr. B. C.	London	Dr. B. C. Eckardt
Gillies, J. D.	Newbury	J. D. Gillies
Gowan, J. E.	Geraldton	J. E. Gowan
Hambleton, Jack	Toronto	[1]
Hipel, N. O.	Preston	N. O. Hipel
Irwin, John C. W. (2 Briefs)	Toronto	J. C. W. Irwin
Kaulbeck, O. A.	Port Arthur	O. A. Kaulbeck
Langstaff, A. R.	Spencerville	[2]
Larson, R. H. (Fort Frances "Times" Ltd.)	Fort Frances	R. H. Larson
Lehtinen, O.	Fort William	O. Lehtinen
Moran, Frank B. (Brief and Supplement)	Port Arthur	F. B. Moran
Newton-White, E.	Charlton Station	J. C. W. Irwin
Omejer, Major Odegard (Norwegian Consul)	Toronto	[1]
Smith, James B.	Toronto	J. B. Smith
Start, W. D.	Kenora	W. D. Start

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[1] Brief not read by a sponsor at a public hearing of the Commission.
[2] Brief read into the record by the Counsel for the Commission.
[3] Read on behalf of several joint sponsors.

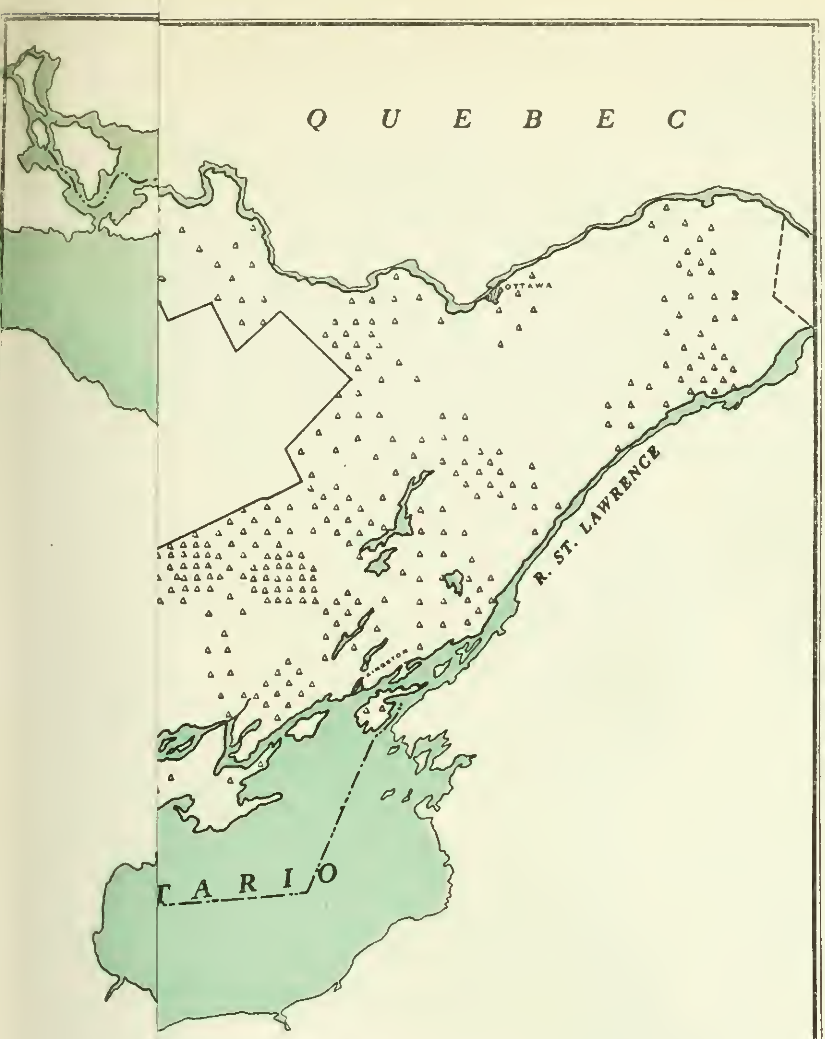
Letters were received from the following individuals:

Devitt, A. W.	Kitchener
Ekman, Carl M.	Winnipeg
Foley, Gerald R., and Grier, Kenneth S.	Lansdowne
Henderson, A. B.	Brockville
Henderson, Miss Mary Jane	Montreal
Hesman, Walter	Golden Valley
Hickling, Mrs. Jessie	Yearley
Hope, Mrs. George	(Unknown)
Howard, Rev. A. L.	Meaford
Kingscote, A. A.	Guelph
Knapp, Harold	Maberley
McDougall, Lorne	Belleville Chamber of Commerce
Reeves, E. H.	Toronto

APPENDIX B—IDENTIFICATION OF WITNESSES

In addition to those presenting briefs, the following individuals presented verbal testimony before the Commission:

Acheson, Keith
Addison, P.
Amidon, Geo.
Anderson, Mr.
Avery, B. F.
Backus, John
Baird F. F. (Dr.)
Baldwin, Geo.
Ballantyne, J. P. S.
Banner, E. L.
Barker, Mel
Barker, Roy
Beck, Mr.
Bertrand, J. P.
Blackburn, F. A.
Brien, W. H. C.
Brodie, J. A.
Bruce, Lloyd
Calder, Ross
Caldwell, J. B.
Cameron, D. Roy
Campbell, C. B.
Case, Mr.
Clark, E. J.
Davis, Clark
Delahey, Geo.
Delahey, W. A.
Docker, W. M.
Douglas, Robert T.
Durrell, W. J.
Faber, Mr.
Fenwick, A. L.
Fiskar, U. W.
Fulton, John S.
Gardner, F. G.
Gimby, W. E.
Godwin, Gordon
Greenwood, W. B.
Haight, H.
Hambleton, J.
Harvey, G. I.
Headley, Mr.
Hesman, Walter
Hilborn, P. R.
Holmes, A. A.
Hughes, H. R.
Irwin, C. H.
James, Thos. J.
Johnson, R. E. L.
Kensit, N. M.
Lahti, J. L.
Larose, Ferdinand
Lee, Roger
Lemay, P. V.
Lenz, Major W. E.
Lewis, Mayor Stanley
Little, Walter
Lloyd, Mr.
Lowe, E. H.
MacDonald, Fred R.
MacQuarrie, E. M.
McAllen, C. J.
McCullough, G. A.
McGonigal, G. I.
McManus, J. J.
McMillan, N.
Mallory, A. D.
Marsden, S. E. P.
Meyers, G. F.
Morison, M. B.
Mulloy, G. A.
Newman, F. S.
O'Mara, P. J.
Pennock, J. D.
Pepler, W. A. E.
Perdue, J. G.
Porter, Watson
Rathwell, M.
Read, A. P.
Reeves, E. H.
Reise, Fred
Ross, K. G.
Sawyer, O. E.
Secord, Dr.
Shaw, Geo.
Sherrett, J. A.
Sintzel, F. C.
Snider, F. E.
Steele, W. E.
Stewart, Milton
Thurston, Willard
Walkinshaw, C. A.
Ward, D. H.
Ward, E. L.
Wardrope, G. C.
Welsby, G. H.
Whitmore, W. H.
Woodman, F. W.
Young, C. B.
Zavitz, C. H.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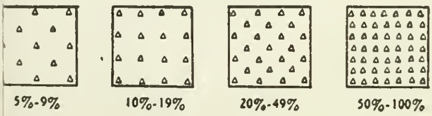
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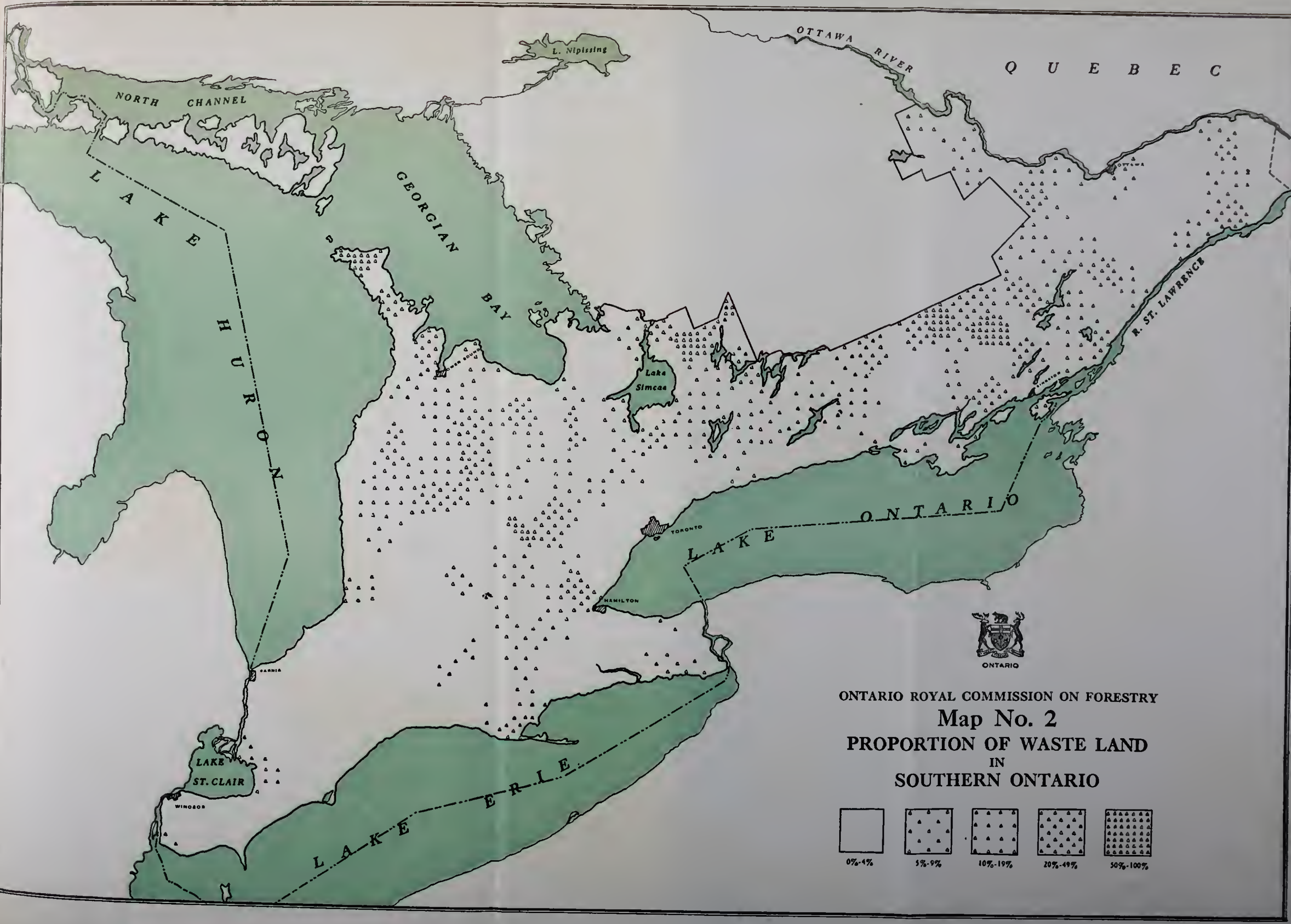
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ONTARIO ROYAL COMMISSION ON FORESTRY

Map No. 2
PROPORTION OF WASTE LAND
IN
SOUTHERN ONTARIO

ONTARIO

REPORT

of the

ONTARIO ROYAL COMMISSION ON MILK

1947

ERRATA

On page 114 of Report Proper, delete "and" in last line, bottom of page.

TORONTO
Printed and Published by Baptist Johnston, Printer to the King's Most Excellent Majesty
1947

Copy of an Order-in-Council approved by The Honourable the Lieutenant-Governor, dated the 1st day of October, A.D. 1946.

Upon the recommendation of the Honourable the Prime Minister, the Committee of Council advise that pursuant to the provisions of The Public Equiries Act, R.S.O., 1937, Chapter 19, the HONOURABLE DALTON C. WELLS, a Justice of the Supreme Court of Ontario be appointed a Commissioner to enquire into and report upon

(a) the producing, processing, distributing, transporting and marketing of milk including whole milk and such products of milk as are supplied, processed, distributed or sold in any form; the costs, prices, price-spreads, trade practices, methods of financing, management, grading, policies and any other matter relating to any of them but not as to restrict the generality of the foregoing, the effect thereon of any subsidies or taxes paid or imposed.

(b) the scheme contemplated by the provisions of The Milk Control Act, R.S.O., 1937, Chapter 76 as amended, and the administration thereof by the Milk Control Board.

The Committee further advise that the said Commissioner shall have the power of summoning any person, and of requiring him to give evidence on oath, and to produce such documents and things as the Commissioner deems requisite for the full investigation of the matters in which he is appointed to examine.

Certified,

C. W. BULMER,
Clerk, Executive Council.

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Report of the Royal Commission on Milk Province of Ontario

To his Honour the Lieutenant-Governor in Council:

May it please your Honour: By terms of reference approved by your Honour in Council on the 1st of October 1946 I was appointed a Commissioner to inquire into and report upon:

(a) The producing, processing, distributing, transporting and marketing of milk including whole milk and such products of milk as are supplied, processed, distributed or sold in any form; the costs, prices, price-spreads, trade practices, methods of financing, management, grading, policies and any other matter relating to any of them but not as to restrict the generality of the foregoing, the effect thereon of subsidies or taxes paid or imposed.

(b) The scheme contemplated by the provisions of The Milk Control Act, R.S.O., 1937, Chapter 76 as amended, and the administration thereof by the Milk Control Board.

By a further Order-in-Council on the 24th of October 1946, I was afforded the services of Mr. Beverley Matthews, C.B.E., K.C., as Counsel, Mr. Donald A. Keith, M.B.E., Barrister-at-Law, as Secretary, Professor William M. Drummond, M.A., as Economic Consultant, and Mr. John S. Entwistle, C.P.A., as Accountant, in conducting the enquiry.

I beg to report the result of the enquiry as follows:

The report is prefaced in Chapter 1 by a summary of the findings, recommendations and suggestions, but only the more important aspects of the matters investigated are touched upon in that summary.

The bases of these findings and a fuller statement of the facts elicited by the enquiry are set out at greater length in the text. In reaching these findings, I have had the most generous assistance and counsel from the gentlemen appointed to assist me. Responsibility for the ultimate findings and conclusions, however, must rest on me.

The sources of information and the procedure followed are indicated in Chapter 2. A list of the witnesses and all public bodies, organizations, associations and individuals making submissions on the enquiry are set out in Appendix 1.

CHAPTER I

Summary of Findings, Recommendations and Suggestions

The production, distribution and consumption of milk are subjects of wide-spread interest in the Province of Ontario. Consumption of fluid milk in this Province has risen from 250,405,000 quarts in 1939 to 467,736,000 quarts in 1946. Nearly 150,000 persons are directly engaged in the production, transportation and distribution of fluid milk, cream, ice-cream, cheese, butter, concentrated milk and other milk products, in the Province of Ontario. The total value of milk production in Ontario for the year 1946 was estimated at $154,981,000, of which fluid milk sales amounted to approximately $60,500,000. There are approximately 16,000 producers producing milk for fluid consumption, 76,000 producers producing cream for butter, 23,500 producing milk for cheese, and an additional 14,000 producing milk for the manufacture of concentrated products. It is also estimated that there are approximately 20,000 persons engaged in the processing, transporting and distribution of milk and other dairy products.

As to the importance of milk itself, Dr. F. F. Tisdall, of Toronto, an eminent authority on nutrition, stated before me that from his studies in connection with nutrition, his respect for milk as an article of diet continually increased. In his opinion no other single food contained so many nutrients essential to life.

In making this enquiry hearings were held throughout the Province so that all factors affecting the problem received proper consideration. Sittings were held at Port Arthur, Fort William, North Bay, Belleville, Ottawa, Hamilton, London, Windsor and Toronto. Forty-two days were consumed in taking evidence, some 67 briefs were submitted and 154 witnesses examined. The evidence extends to some 5,681 pages. Of the witnesses examined, 29 witnesses represented distributors, 70 witnesses represented producers and some 39 witnesses were consumers or represented consumers. The Mayors of the Cities of Toronto and Hamilton gave evidence and the City Solicitors of Ottawa and Windsor appeared on behalf of their respective municipalities. Some six witnesses appeared for those transporting milk and twelve experts were heard on subjects ranging from applicable legislation to problems of nutrition. The only major group who failed to make representations to the Commission or to assist it voluntarily were those manufacturing concentrated milk products. At my instance an examination of their operations was made through accounting studies.

THE MILK CONTROL BOARD

The second matter referred to me, that is the administration and operation of the Milk Control Act through the Milk Control Board, is considered first in this Report. In 1934 the Ontario Milk Control Board, created by the Milk Control Act of 1934, set to work to stabilize prices, both to the producer and to the consumer, at levels which it was considered could be held, and which would prevent the bankruptcy of the farmer. Prior to this the whole price structure of the industry had collapsed, due to the depression, and the industry, in Ontario as elsewhere, was in a chaotic condition. The Board, wherever possible, achieved these purposes by obtaining agreements between producers and distributors. Existing processing and distributing plants were licensed. It was considered that the number of distributors at that time was excessive, and new candidates for entry into the business were refused permission except where, in the Board's opinion, public necessity clearly required them.

There is no doubt in my mind, and I think it is amply supported by the evidence, that the over-riding factor in setting the policy of the Milk Control Board, from its inception to date, has been the welfare of the dairy industry as a whole, in the belief that thereby, as a sort of necessary corollary, the general public interest was best being served. The Board has functioned along limited lines and, in effect, has attempted to let the industry rationalize itself. No effective pressure was brought to initiate needed economies or more rational methods of distribution until certain improvements were effected under pressure of wartime conditions in 1942. It is an amazing fact, but apparently true, that at no time in exercising its functions has the Milk Control Board had a really adequate knowledge of either producer or distributor costs, nor could it possibly have had such knowledge with the staff available.

I think that the emergency which warranted this policy has long since passed, and that another factor, quite apart from the vague general public interest previously regarded, deserves definite attention,—namely the interest of the actual consumer of milk. Sanitary standards, compulsory pasteurization, standard products and other things, have combined to make a very high quality product available to the consuming public of Ontario daily. I feel that the same attention to securing confidence in the price charged for these products would greatly assist in maintaining and increasing levels of consumption.

The Milk Control Board, by virtue of the terms of the Act, has been called on to perform two conflicting functions, the one administrative and the other judicial, in respect to licensing. In my opinion the judicial function has not been performed judicially but has been governed by the over-all administrative policy of the Board. Administrative objectives seem to have been the governing factor and to have coloured the Board's interpretation of the terms of the Act and its application to individual applicants. A more effective division of these functions would seem desirable.

Price-fixing:

With respect to price-fixing, until such time as an effective producer organized marketing scheme can be developed, the evidence has convinced me that some responsible authority must fix and enforce the price to be paid to the primary producer for milk to be used for the fluid market and for concentration.

Such authority must have an adequate knowledge of costs of production and statistics with respect to general business levels, and price and wage indices. I have come to the conclusion that the Milk Control Board should be in a position intelligently to set such prices by arbitration, or failing this, be able to advise the Government as to a proper price structure. Up to the present time the Milk Control Board, because of its lack of essential statistical data, does not appear to have been in this position.

At the consumer level, I am convinced that distributors must be compelled to compete on price. An over-riding authority should be vested in the Board to fix prices if competition shows undesirable results.

Under the administration of the Board the product has been standardized as to quality, competition as to price has been eliminated, and the only competition left between the various distributors is as to services. In my view this is a most wasteful and expensive form of competition.

Consumer Representation on Milk Control Board:

Labour as a group, and numerous consumer witnesses, represented that each should have representation on the Board, to speak for special interests. There would seem to be no limit to representation of this kind, and in my view, appointment to the Board should be based on ability to perform the work required, not representative interest. It appears that Consumer Representatives appointed specially by municipalities have not been able to get essential information. The Board should amend its administrative practice to conform to the provisions of the Milk Control Act, and invariably provide such information.

PRODUCTION AND THE POSITION OF THE PRODUCER

Many producers, not only for the fluid trade but also for cheese-making, concentrated milk production and for butter-making, appeared before me as witnesses. The high standard of these representative Ontario farmers could not help but be specially noted. Almost without exception, however, producers were concerned with the cost of their product regardless of demand, and with the apparent disparity between farm prices and costs of production. When it is realized that only approximately a quarter of the milk produced in Ontario is utilized for fluid consumption and commands the maximum price, it will be readily understood that the farmer always faces a market in which the purchaser has the advantage. Surplus milk sells at approximately $1.00 per hundredweight less than milk for fluid consumption. Surplus prices really govern the average net return to the producer. The only ultimate and really satisfactory solution for the producers is the development of a comprehensive marketing scheme and of methods of manufacturing or disposing of surplus milk. Until they can do this they will have to rely on such protection as the Milk Control Board and Provincial Authority can furnish to maintain a stabilized price structure.

Despite the development of the organization of the fluid milk producers in the Ontario Whole Milk Producers' League, that organization is not yet strong enough, in my opinion, to effectively protect the producers' position as against the distributor, particularly under conditions of decreasing demand. I doubt also that the rank and file of its members have as yet recognized the necessity of seeking their own salvation through an effective marketing organization.

The producers established that in no case were they getting their cost of production plus even a reasonable administrative allowance. In view, however, of the decreased consumption since the price increases of October, 1946, it would not seem economically possible for the producers to obtain more for milk sold for fluid consumption than is presently being paid them. Factors affecting the costs of production are discussed in considerable detail in the report. The key, however, to an adequate return to the farmer-producer is not only in his obtaining his costs for fluid milk, but also in a proper disposition of his surplus milk at adequate prices. At the present time it is quite clear, from the evidence, that the producers as a whole do not know their own costs of production. Various methods for establishing these are discussed in the Report.

While blended prices for all milk are paid in other jurisdictions, with certain appropriate premiums for quality as, for example, in Great Britain and New York State, this solution of the producer's problem of getting a reasonable return for his milk has not yet reached the position in Ontario where it can be deemed to have much practical value. There is no substantial producer opinion to support it.

As standards of farm life and income rise, no doubt, it will be found progressively easier to accomplish improvements in herd management and volume of production. While these, by comparison with other countries, cannot be said to be unsatisfactory, the twin goals will always demand serious attention and effort, by producers and government jointly.

In view of the apparent necessity for governmental protection, a corresponding duty devolves on the producers to pursue the study of ways and means to cut costs of production, in order that the ultimate consumer be not penalized. Many producers already recognize this.

Problems affecting the producer, such as the butter-fat test, the quota system, the necessity of the maintenance of present controls and, in my view, the ultimate necessity of the creation of some effective marketing scheme, are dealt with in detail in the Report.

TRANSPORTATION OF FLUID MILK

The transporters as a class are at the moment the agents of the farmer in most cases, to carry his product to its market. With the farmer as the principal, it has seemed impossible to eliminate waste and duplication of service. There is no doubt that the Transporter under the present system has done the work effectively but, I feel, at a price which is not warranted. In the case of a vital food the consumer cannot be asked to pay to maintain an inefficient system. Unless the Transporters can themselves agree on a method of eliminating waste and duplication, appropriate economic pressures would appear to be in order. If, by fixing the price of fluid milk at the farm rather than the dairy, the Transporter became the employee of the distributor, and the distributor in turn were forced to compete with respect to price, the high cost of duplication of service and waste mileage would quickly become apparent, and I feel would in time be eliminated. The excessive cost of transporting milk would seem to be a factor in the price to the consumer which has received little consideration or attention.

DISTRIBUTION AND THE POSITION OF THE DISTRIBUTOR

In this Province, as a result of high standards of quality and fixed prices to producer and consumer, the Distributor has been forced to compete for volume in the service he provides to his customers. A very representative number of distributors appeared before me during the course of this enquiry and five things stand out in mind, as a result of the whole volume of their evidence, namely—

(a) The distributor operates on a very narrow margin of profit per unit. Generally speaking, profits lie in volume of distribution and diversification of product. A fractional loss per unit can quickly create a large loss.

(b) A distributor who maintains the quality of his product, who keeps his business diversified and upholds a high standard of service, will, if operating efficiently for the volume of his business, show a profit at present prices. Under present conditions such profit will be something less than one cent a quart. It would appear that the profits of the distributors are not unreasonable in amount when considered on a unit basis, but the key to cheaper milk would seem to lie in lowering distribution costs which, at the present time, approximate 25 per cent of the cost of a quart of milk.

(c) Every distributor is aware that certain changes in methods of distribution would result in some economies; for example, every-other-day deliveries, different types of containers, depot sales and others.

(d) No distributor is prepared to initiate any radical change in what the consumer has been educated to expect in the way of service, when he is prevented from offsetting any initial dissatisfaction with a change, by offering the consumer the benefit of any saving made by reducing the price. Economical changes made must at present be unanimously adopted by all distributors in any market at the same time. This, obviously, discourages, if not entirely obviates, reduction in distributive costs.

(e) There is no real difference between the product of one distributor and that of his competitor.

One other primary factor which dominates the whole of the distributive industry in the Province of Ontario is that the Borden Company Limited, Silverwoods Dairy Limited, and Dominion Dairies Limited, handle between them approximately 30 per cent of the dollar value of fluid milk distributed in the Province of Ontario and 40 per cent of all products handled by distributors. A further fifty-five companies handle an additional 18 per cent of total sales and, on examination of the financial records of these companies, it would appear that, if the law permitted, they could afford to enter into competition in respect to prices charged to consumers. The great majority of the remaining distributors, approximately 750 in number, are operating comparatively small businesses, in many cases in small towns and villages throughout the Province. It is doubtful that these distributors can afford any reduction in price at the present time and indeed, if they were compelled to meet a competitive reduction in price, many of them would be forced out of business. However, as will be seen from my report, many of these smaller distributors have a monopoly of the business in the area for which they are licensed, and I am not convinced that permission to compete as to price would result in disaster to any considerable number of existing distributors.

I am satisfied that by and large when milk is sold in the fluid market the producer is paid for it at the fluid rate. The use of surplus milk, however, in the case of those distributors who have equipped themselves to handle it, has been a profitable form of business. This is particularly applicable to those distributors who sell ice-cream and ice-cream mix. Another hidden source of profit to distributors is in connection with the price paid for butter-fat in milk used for the fluid trade. Since December of 1940 any milk purchased for the fluid trade by a distributor which tests over the base 3.4% butter-fat, brings a premium to the producer of 3½ cents for each 1/10 of 1% over such base figure. Similarly, a deduction is made from the standard price of the same amount for each 1/10 of 1% below the base figure. Prior to December, 1940, this butter-fat differential was a variable figure depending upon the wholesale price of creamery butter. At the present time, with creamery butter selling at more than 60 cents per pound to the consumer, the value of butter-fat would appear to be nearer to 6 cents per 1/10 of 1% butter-fat than to the fixed differential of 3½ cents. Most of the large distributors standardize their milk for sale to the consumer at 3.4% or 3.5% butter-fat and consequently are able to dispose of excess butter-fat at present prices at a substantial profit.

I fail to see any justification for this fixed differential.

Mr. Entwistle's study would appear to indicate that prior to the recent price increases the average spread between the producer price and the price charged consumers was 5.31 cents. In his opinion this spread was increased by the price increase of October 1, 1946, to approximately 5.68 cents per quart. Methods of decreasing cost and narrowing the spread are discussed at some length in the Report. Under the system of fixed prices to consumers, under which the industry has operated since 1935, there is little incentive to explore these various methods, although this would seem to be the only field in which any improvement can be achieved. Reference is made in the Report to the financial position of the distributors generally, which is also examined in detail by Mr. Entwistle in his report. The general situation would appear to be a very healthy one for the industry, and the increasing volume of sales during the war years has largely offset increased cost of distribution resulting from higher wages and other increased costs. No attempt is made in this summary to express the details of the present financial situation in the industry, as it is discussed at length in the Report.

In conclusion it may be stated that it was not established by the enquiry that milk distribution in Ontario is in any way a monopoly, although the general dependence on large volume constitutes an inherent tendency leading in that direction. The grave defect from the consumer's viewpoint would appear to be the lack of any effective competition, and the remedy for this would appear to be the removal of a fixed consumer price. Consumer subsidies such as obtained during the war years are not, in my opinion, a desirable or effective solution of obtaining lower priced milk under peacetime conditions. The efficacy of public ownership of methods of distribution would appear to depend entirely on their efficiency and diversification of their operation, and in no way offers an immediate prospect of lower price to the consumer. If any public assistance is to be rendered it should, in my view, be limited to the supplying of cheaper milk for school children.

EXAMINATION OF THE FLUID MILK PRICE INCREASE OCTOBER 1st, 1946

Mr. Entwistle, the Accountant attached to the Commission, made a study of the price increase at the end of September, 1946. His examination would indicate that if the price increase had been limited to two cents instead of three cents the industry as a whole would have shown a loss of $1,806,000 for one year's operation. If the price increase had been 2½ cents instead of the three cents which was obtained, a small profit to the industry on an over-all basis of $344,000 would result. This illustrates in a quite startling way the very narrow spread on which the industry operates. Nevertheless in his opinion at least 12 per cent of the distributors, who are responsible for the distribution of nearly 50 per cent of fluid milk, could have afforded to limit their price increase to 2½ cents per quart instead of three cents. The result is that where there is no competition as to price, this uniform increase in price to the consumer gives to these large distributors profits out of all proportion to those obtained by the smaller operators.

CHEESE PRODUCTION

Some 25,000 producers in the Province of Ontario regularly supply milk to cheese factories. The milk going for this purpose in 1945 represented 21.2 per cent of the whole production of milk in this Province. Milk is processed at some 575 factories, by far the larger majority of which are owned on a co-operative basis by the producers supplying milk to them. There are a few large factories owned by Swifts, Kraft, and some other companies, that manufacture cheese, but they are not large enough in volume to affect the general situation. In the result, the price realized by the producer for milk used for the manufacture of Cheddar cheese represents the value of the finished product less the costs of processing, and since the finished product must compete on a world market, in view of the very large volume available for export, it has been found in practice difficult to secure a price which the producers feel represents a fair rate having regard to the cost of producing the milk. The producers themselves, through the medium of a marketing scheme set up under the Farm Products Marketing Act, have succeeded in securing the best possible price under existing conditions. However, there has been very little actual control by the cheese producers of methods of marketing overseas, although the price thus obtained is the governing factor in the return to the cheese milk producers. It must be remembered that the war and post-war period has been abnormal in view of the over-riding necessity of supplying food to Great Britain and the consequent absence of a free market. However, there is no doubt that the cheese producers are strongly organized and able to afford themselves a considerable measure of protection.

It will be abundantly clear, however, from the detail given in this Report. that the Ontario cheese producer does suffer from his apparent unwillingness to amalgamate cheese factories with a view to securing a large volume of production with a minimum capital investment and overhead charges. This has been drawn forcibly to the attention of the cheese producers and every step should be taken that is possible to ensure that the number of cheese factories be reduced and the production per factory substantially increased.

Ontario Cheddar cheese holds a very high reputation in the world market and the Ontario producer should not permit the return for his labours to be frittered away in inefficient and wasteful methods of processing.

CREAM PRODUCERS

There are upwards of 76,000 producers in the Province of Ontario who supply cream for the manufacture of butter. There are two significant facts which have again been brought out by this investigation, namely, that cream production is by and large the by-product of other types of farming, and secondly, that the average production per creamery in the Province of Ontario is far below that of other provinces, such as Saskatchewan, Manitoba and Alberta, and a mere fraction of the average production in New Zealand. The producers have not taken advantage of government assistance offered to amalgamate creameries with a view of reducing capital and overhead, and, like the cheese producers have, for the sake of convenience, been permitting a substantial part of the return from their labour to be lost through duplication and inefficient methods of processing.

Another very important point which has been established by the evidence is the excessive waste and duplication in the transportation of cream from farm to creamery. This must be corrected if the producer is to receive the maximum possible return for his product.

PRODUCTION OF MILK FOR CONCENTRATION AND THE POSITION OF THE MANUFACTURERS

Upwards of 14,000 producers supply milk to factories for the making of condensed and evaporated milk and milk products. The price paid for milk used for this purpose has been subject to some measure of control and price-fixing by the Milk Control Board, but since the end-product is to a large degree exported, and since the Milk Control Board has not been in possession of sufficient information either to know the costs of production of the farmer or the result of the distributor's operations, the price-fixing undertaken has, in my view, lacked a proper basis to justify it. An examination of the financial returns of companies engaged in the concentration of milk has been handicapped by the fact that some of the larger concerns are subsidiaries of British and American companies and full information has not been available in this Province. Such investigation as has been possible, however, leads one to the belief that a very high rate of return has been earned by these companies, some of which could very well have been paid to the producers. The real remedy lies in the hands of the producers themselves, with the use of existing facilities for government financial assistance, namely to follow the example of the Montreal producers and the producers for the twin cities of Minneapolis and St. Paul and many others, and to establish their own factories for the concentration and condensing of milk. In this way the producer can be assured of receiving the maximum return for his raw product.

A very significant fact, however, was disclosed as a result of the Accountant's investigation, namely, that in the case of concentrated milk products the main source of profit lies in the export trade. Profits from domestic sales appear to be small. This may have been due to wartime price control. One major concentrator which has plants in Ontario and Quebec, seems to find it convenient to use its Quebec production for the export trade and its Ontario production for domestic trade. This is a factor which may adversely affect the producer of milk for this purpose in any one province. With the experience after the first World War as a guide, it should also be remembered that the large profits in export trade cannot be counted on indefinitely.

CONSUMPTION AND THE POSITION OF THE CONSUMERS

A considerable number of interested witnesses appeared as consumers, and while in the very nature of things they could not be expected to have a detailed knowledge of the dairy industry, at the same time it was obvious that a substantial body of opinion favoured the introduction of reforms tending to ensure that the consumer was not left at the mercy of the producer and distributor. Substantially the consumer's case was pressed on a basis of need irrespective of price or cost. Many consumer witnesses were in favour of the payment of subsidies, preferably by the Provincial Government, in order to keep the consumer price down to a very low level. Those making such recommendations, however, did so without an adequate appreciation of the cost of such subsidies if any appreciable reduction was to be made. Other recommendations, that municipalities be permitted to engage in the processing and distribution of milk, that co-operatives be permitted to pay consumer dividends, and that consumers of large quantities of milk be given the benefit of something approaching wholesale discounts, appeared to me to be better supported. On the whole, the consumer position can be summarized as requiring a recognition that milk is an essential part of daily diet and that no group, whether producers or distributors, should be permitted to secure an unreasonable profit in the supplying of such a vital food. If consumers can be convinced that such is not happening, much of the controversy as to price may disappear.

The foregoing is intended to be a very brief epitome of the more important matters disclosed by this investigation. The various points mentioned and many others are dealt with in detail and at length under the appropriate chapter headings of this Report, and supported, where necessary, by the Appendices. No doubt all who have an interest in this subject will make full reference to the text of the Report and the Appendices.

The general conclusions and recommendations as expressed in the Report are reproduced in this summary in their entirety, as it appears to me desirable that those using the summary should have these in full.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The Milk Control Act was originally passed to relieve a state of crisis which existed in the production and distribution of fluid milk in the Province in the year 1934. Methods propounded to meet this crisis have grown into a species of control maintained long after the emergency has ceased to exist.

If it were possible to disregard this development, an arrangement where the producers of milk in this Province were organized in a marketing authority with power to direct the disposition and use of milk for whatever purpose seemed appropriate, would seem the best solution of their difficulties. As I have suggested, this might well be modelled on the present British scheme, which is in essence an organization of the producers themselves. But as I have previously indicated, the producers as a class, apart from some such comprehensive organization, are not able to protect themselves in bargaining with the distributors. If they were, I would be inclined to the opinion that the full play of competitive forces would reasonably protect the consumer in respect of distribution and would in the long run produce a much more economic and better organized system in the industry as a whole. Practically speaking, however, the producer organizations are not strong enough at the moment to fend for themselves alone. No over-all marketing organization of producers exists in the Province of Ontario. I must deal with the various factors as they exist at the present time. It would, therefore, seem essential at the present to maintain the existing controls.

The effect of the operation of the Milk Control Act since 1934 has been to remove most of those competitive pressures which ordinarily operate in respect of private business. In doing this, it has not substituted that full measure of public control which would seem to be the necessary alternative. In the result, therefore, particularly under inflationary or semi-inflationary conditions, the consumer has suffered. Instead of having the benefits of the operation of one principle or the other in the industry, the general public, in my view, have had some of the worst results of both. At the present time fluid milk as produced and sold in Ontario is, for practical purposes, a standard article sold at a fixed price. The only real measure of competition left among the distributors has been that competition in services, which is probably the most wasteful and extravagant form of competition that exists. What should be done at the moment would seem to me to be the taking of necessary measures to reintroduce some real and effective competition in the distributing end of the industry; and, for the protection of the producers, to continue the existence of the Milk Control Board. Its powers, however, should be clarified and enlarged. Under the present circumstances it is not sufficient to allow the industry to regulate itself at its own free will. There is an obligation on the Board to bring pressure to reduce waste and duplication, and to see that the interests of the three groups which are vitally concerned in the industry, namely, the producers, the distributors and the consuming public, are each reasonably protected and considered in a more definite and effective way than in the past twelve years.

While the earlier period of the Milk Board's operations may be thought of as an emergency period during which the central objective was to bring order out of chaos, the time has now arrived when the general objectives of the Board should be greatly enlarged. The basic reason for its continued existence must be its success in obtaining increased efficiency in milk production and marketing.

In respect of the Milk Control Board, therefore, certain specific recommendations are made herewith; others will appear as incidental to recommendations made under other heads.

Before making these recommendations, however, there is one other matter that should be mentioned: Sections 4 and 13 of the Milk Control Act give the Board various powers. Some doubt has been raised by the law officers of the Crown as to the power of the Board to fix prices under these sections. A perusal of the sections undoubtedly affords a reasonable basis for the doubts expressed. Without expressing an opinion on the Board's powers under the present statute, it should be pointed out that it casts a great and, in some measure, unfair responsibility on government to ask it to fix prices in a private industry, in the general administration of which it has in effect no decisive voice. The only justification for such exercise of authority would appear to be some infringement of the public interest. Insofar as price fixing is concerned, in the first instance the basic responsibility for the determination of prices would seem to rest on the industry itself. If, however, it is impossible for the parts of the industry to agree, then in dealing with a vital food such as fluid milk it may be desirable that an administrative authority such as the Milk Control Board should have the right to arbitrate between the various interests, and to determine an arbitrated price between the component sections. Similarly, if a price arrived at by the industry is against the public interest, paying attention to the interests of the producers, distributors and consumers alike, there may be responsibility on government to intervene in respect of the interest adversely affected. It is desirable also that the administrative body dealing with the problem should be able to advise the final authority on a sure basis of knowledge and accurate information. To date there has been no consistent effort to study the costs and profits of either the producers or the distributors. For example, at the time of this Investigation such a fundamental fact as the ratio of wholesale to retail sales in the distribution of fluid milk was not available in the records of the Milk Control Board or the statistics branch of the Department of Agriculture. A sample study had to be made on behalf of the Commission.

I therefore recommend, *as to price fixing*:

(a) That the Milk Control Board commence and continue the collection and study of representative cost data in respect to producers. Detailed suggestions as to how this might be done are contained in Appendix 28.

(b) That it should also undertake a continuous collection and study of the cost and profit position of the distributors. It may be that the powers of the Board under section 15 as at present constituted are sufficient for this purpose, but if not they should be reconsidered and clarified.

(c) That such additions to the staff of the Milk Control Board as are necessary to carry out (a) and (b) be considered.

(d) That sections 4 and 13 of the Milk Control Act be revised to clearly give the Board authority to arbitrate a price for fluid milk as between producers and distributors, and in cases of necessity as between distributors and consumers.

(e) Further, that the power of the Board be made clear to enable it to ultimately determine a price for fluid milk either to the producers or to the consumers if the prices obtaining are against the public interest, as determined by the rights and interests of the producers, the distributors and the consumers, with the result that in practice—

(i) The price of fluid milk at the consumer level be not agreed to or fixed in ordinary circumstances. The power should be a corrective one only, and

(ii) That prices paid by distributors to producers be fixed or agreed upon as heretofore and that such prices be ordinarily fixed on the basis of delivery at the farm unless other methods are successful in eliminating duplication and excessive cost in transportation from farm to dairy.

As to Co-operatives—

(f) That section 11 of the Milk Control Act preventing rebates by distributors to customers, and which in effect prevents the effective operation of consumer co-operatives, be repealed.

Licensing—

(g) (i) That the administrative and judicial functions of the Board as to licensing be separated by setting up an Advisory Board somewhat similar to the Insurance Advisory Board in order that the judicial functions of the Milk Control Board be exercised as provided by the statute free from administrative bias.

(ii) That the conditions entitling applicants to licenses be more explicitly set forth in the Milk Control Act.

Composition of the Board—

(h) At the moment the Board is set up on a representational basis. Without unduly criticizing the unselfish service that has already been given to it by those appointed under this system, I am unable to see much solid advantage in it. I would recommend that in future when appointments to the Board are being considered regard should be had to the capacity and fitness of the person concerned rather than to the interest he or she represents.

Consumer Representation on Milk Control Board—

(i) In respect of consumer representation on the Milk Control Board, as I have said, I do not think that representation of special interests adds greatly to the strength of such a body. The present provisions in the Milk Control Act for consumer representation in special markets, should be continued, but the administrative practices in respect of them should be changed and the intent of the Act followed more closely. I would recommend that where a consumer representative is accredited to the Board and enters on his duties, he should be required to take an oath of secrecy and that all the information available to the Board be completely disclosed to the consumer representative in respect of the matter under consideration.

Recommendations with Respect to Producers

In respect to the producers, my view is that the ultimate solution of their difficulties will be found in the setting up of a marketing organization for all producers. This may not be immediately practicable and, if not, I would suggest:

(a) That a start be made in organizing the fluid milk producers, and that the further study and consideration of the entire project be initiated and pursued with as little delay as possible by the existing joint committee representing the four sections of milk producers. In respect of the form of such an organization, attention is again specifically directed to the British scheme, which would seem to provide most of the necessary principles upon which to build such an organization.

(b) That the existing producer organizations, particularly the Ontario Whole Milk Producers' League, be encouraged themselves to take steps to process and dispose of fluid milk not required for the fluid market. In view of Mr. Entwistle's study of production prices paid producers and distributor spreads, a substantial increase in the price paid to producers for secondary milk would appear to be justified at the present time without alteration of consumer prices for the resulting products and such increase might be found to be as much as 10% more than present prices.

(c) That the regulations of the Milk Control Board assure that producer association employees be permitted to check the accuracy of testing in distributor and processing plants to remove present suspicion and dissatisfaction regarding the accuracy of these tests.

(d) That the practice of paying price premiums or discounts in accordance with variations in butter-fat content of the milk be reviewed to the end that the amounts paid correspond with current prices for butter-fat. These particular payments should be subjected to review and, when necessary, revision at monthly intervals.

(e) That in view of the existing conditions of supply and demand no further increases in fluid milk prices be granted at the present time. This recommendation is made in view of the demand situation, and despite the fact that in the view of the Commission existing prices do not cover the cost of production plus a reasonable profit or even a proper administration allowance.

(f) That the present efforts through the Department of Agriculture be intensified to assist producers in applying the knowledge gained by research and study to the further improvement of volume and quality of production and to the further reduction of producers' costs.

Special Recommendations in Respect to Transportation

It is obvious from a perusal of the discussion of Transportation in this Report that I regard the present system as uneconomic and wasteful. Ideally, I think it would be desirable to fix the price of milk at the farm and allow normal competitive pressures on the distributors to lead them to rationalize their methods and costs of collection. This may not be immediately practicable, but, if it were possible, I would recommend:

(a) That where the price of milk to producers is fixed, it be fixed on the basis of delivery at the farm.

(b) In default of this I would recommend that the Milk Control Board be given the power to fix rates for transporting milk and to designate and license all truckers of milk.

(c) That the licensing of such truckers under the Commercial Vehicle Act be discontinued.

(d) That the practice of conducting hearings before the Municipal Board be discontinued, and that the whole power be vested in the Milk Control Board.

(e) The regulations under the Milk Control Act, and the Milk Control Act itself, should also be clarified to give the Board authority to designate routes for such truckers.

The foregoing observations in respect to the transportation of fluid milk apply with equal force to the transportation of milk and cream to condensaries and creameries.

(f) That the regulations be changed and the Commercial Vehicle Act be amended to permit farmers to haul milk co-operatively through co-operative associations for themselves and their neighbours, and that such permission be granted without regard to other existing facilities.

Special Recommendations in Respect to Distribution

In the hope that experiments in further economies, such as quantity discount sales, depot sales, every-other-day delivery, five and six-day delivery, zoning and similar practices will be actively investigated and tried, it is recommended:

(a) That the retail consumer price should be made open and competitive without fixation by agreement or Milk Control Board order.

(b) That the special distributor economies brought into effect in 1941 and 1942 under wartime conditions be retained by the distributors.

(c) That all distributors be required to maintain a complete and standardized set of business and financial records.

(d) That returns sufficient to enable the Milk Control Board to determine their costs and profit margins be required of all distributors, to be filed not less than three months after the end of their fiscal year, these records to include details of capitalization, depreciation and financial policies generally.

Recommendations in Respect to Consumers

It must be apparent from a perusal of Chapter 7 that, looking at the over-all picture in Ontario, no recommendations as to price reductions from those presently obtaining can be made when the interests of all the distributors are considered. Mr. Entwistle's report shows that about 12 per cent in number of the distributors, who apparently distribute more than 50 per cent of the fluid milk in the Province, could sell milk at cheaper prices. I suggest that cheaper prices might be brought about by providing for a free competitive price at the consumer level. If it is done by other means it may well be that the larger number of the distributors, something in excess of 750 in all, will not be able to withstand the financial pressure of prices lower than those presently in effect. So far as volume distribution is concerned, it would appear that such a price reduction would adversely effect those who distribute less than half of the volume of fluid milk sold. It would unquestionably affect many of the distributors in smaller markets.

It is a question whether it is best in the public interest to maintain the existing large number of small distributors in certain cases at the cost of milk consumers; or whether through arbitrarily narrowing the distributor's spread it is better to accelerate the slow process of amalgamation that has been going on among the distributors since the passing of the Milk Control Act in 1934. Arbitrary narrowing of the distributor's spread at the present time would undoubtedly accelerate the process of amalgamation and consolidation, and the distribution end of the industry would end in the hands of a few large distributors. As they are presently situated, the smaller distributors, except in rare instances, could not withstand the financial pressure resulting from such a policy. Insofar as many of them are concerned, the result might be financial embarrassment, forcing them to amalgamate with their competitors to obtain larger volume, or they might be forced to sell out to the existing large volume distributors. Which state of affairs is the most desirable is a question of public policy, on which it would not be proper for me to comment. In my view, however, the abolishing of the practice of fixing prices for fluid milk to the consumers and the restoration of competition as to price among the distributors, is well worth trying before other measures are considered.

Nevertheless, despite the apparent costs of production and distribution at the present time, in view of the fact that cheap milk generally means large volume of consumption, it might well pay both the producers and the distributors of fluid milk arbitrarily to cut their prices all along the line to something approaching the level obtaining before the price increases of October 1, 1946, or in any event by a substantial amount. The problem of the producers' surplus, which seriously affects the average price received by the producer, might no longer be so pressing. The experience of the distributors over the war years under conditions of rapidly expanding volume and low consumer prices might justify them in again trying the experiment.

It is recommended that the necessary amendments be made to the Municipal Act and the Milk Control Act to permit the setting up and operation of municipally owned distributor plants with power to deal in all dairy products and that in so doing such distributor operations be made liable to Municipal and Provincial taxes in like manner as other distributors.

Finally, it is recommended that consideration be given to supplying milk to school children in primary and secondary schools through public assistance at cost, or in cases of necessity free of charge; and that in considering the same, attention be paid to the provisions of the National Milk Scheme in Great Britain.

Recommendations in Respect to the Cheese Producers

In respect to the cheese producers, discussion of their problems in the Chapter relating to them does not give rise to any special recommendations, but it would seem essential:

(a) That they take steps which should be implemented in any way possible by the Department of Agriculture to improve the quality of their product and to extend a further and more effective control over its final marketing.

(b) That steps should be taken to familiarize the industry with the provisions of the legislation, both provincial and dominion, providing for financial assistance with respect to the erection of amalgamated factories.

(c) That the cheese milk producers give most serious consideration to the formation of an over-all marketing scheme.

Recommendations in Respect to the Cream Producers and Creameries

The general recommendations made in respect of Transportation would apply with equal force to the transportation of fluid cream used for butter-making. The recommendations already made in respect of an over-all marketing scheme apply with particular force to this large group of producers.

No doubt any experience gained in the marketing of cream under the Farm Products Marketing Act should be most valuable and should be studied carefully.

Specifically the only additional recommendation I wish to make is that every effort be made by producers, creameries, and through governmental assistance, to greatly increase the volume of production per plant.

Recommendations in Respect to the Condensaries

Many of the observations made in respect to the distributors of fluid milk apply to the manufacturers of milk. It is recommended:

(a) That the Manufacturing Milk Board be given clear authority under the Milk Control Act to require standard methods of accounting, and full and regular information from the manufacturers in connection with their operating costs and profits.

(b) That where such operations in the province represent branch operations of larger concerns with headquarters outside this jurisdiction, a division be made between the business done within and without the province; and to effect this, regulations be made standardizing the accounting methods of these firms.

(c) That along with the study of producer costs in other branches of the dairy industry there be included a study by the Milk Control Board of the costs of producers who produce milk for concentration.

(d) That the producers of milk for concentrated purposes be encouraged to undertake the formation of co-operative processing plants as a means of ensuring that these producers receive the full competitive price for their milk and that consideration be given to providing public assistance for such projects.

(e) That the Milk Control Board investigate the present prices paid concentrated producers for their milk, and in view of the financial situation of the manufacturers, consider whether price increases to producers beyond those already granted should not now be enforced.

CHAPTER II

Introduction and Procedure

At the outset it was impossible not to be impressed by not only the importance of the product under investigation but also the substantial nature of the industry concerned. It is interesting to note that in 1946, the most recent year for which Dominion Bureau of Statistics figures are available, the dollar value of milk production from Ontario farms was set out at $154,981,000. It is estimated that upward of 16,000 producers regularly produce milk for fluid consumption in cities, towns and villages of the Province; that 76,000 producers produce cream for butter; that 23,500 produce milk for cheese and there is an additional 14,000 producing milk for manufacture of concentrated products.

In addition to those engaged in primary production there are approximately 20,000 persons engaged in the processing, transporting and distributing of milk and milk products, including butter, cheese, condensed and evaporated milk and other dairy products.

THE PRODUCT ITSELF

Evidence adduced before the public hearings of the Commission made it apparent that milk is a vital food to the public. In this connection I had the evidence of two eminent authorities, that is Dr. L. B. Pett, of Ottawa, and Dr. F. F. Tisdall, of Toronto. In the course of his evidence, which is set out in Appendix 2, along with that of Dr. Pett, Dr. Tisdall stated:

> "Milk contains approximately 3½ per cent fat, approximately 4 per cent carbo-hydrates or milk sugar, and about 3½ per cent protein. In addition, it contains a large number of vitamins and practically all the minerals essential for life with the possible exception of iron and perhaps iodine, depending on the pasture. It is the most perfect single food we have today. there is no other single food that contains as many nutrients essential to life as does milk. Now we want to know if all these nutrients can be replaced by other food sources, because if they can be replaced, and replaced economically, then milk is not on any pinnacle, because we could simply take perhaps three or four other foods and replace it, but I would say from our studies, in every single study we have done concerned with nutrition, our respect for milk goes up."

It is also amply apparent from the evidence before the enquiry that to a large extent at least the ideas of the nutritional authorities have taken hold of the public and they are beginning to appreciate the importance and necessity of milk as an essential article of food.

PROCEDURE ADOPTED IN RESPECT TO THE ENQUIRY

Having regard to the importance of the subject matter of this enquiry, the widespread public interest, and the fact that an opportunity was being afforded to review for the first time the functioning and administration of the Milk Control Act in the Province of Ontario, I considered it essential to give every citizen who wished to do so, an opportunity to express his or her views on these matters, and also to ensure that geographically and economically speaking, the local problems of all sections of the Province from the viewpoint of producers and distributors be fully examined.

For these reasons the terms of reference were widely advertised throughout the Province, together with a proposed itinerary of times and places of hearings, and all interested persons were invited to notify me of their desire to give evidence and to submit in advance a brief of the evidence they proposed to give.

In selecting the places for holding public sittings, consideration was given to the density of markets, and any special climatic features that might effect costs and conditions of production and distribution. In the result, it was determined to sit at Port Arthur, Fort William, North Bay, Belleville, Ottawa, Hamilton, London, Windsor, and Toronto. No criticism of the places selected was offered to me, although I specifically invited objections and alternative suggestions.

Forty-two days were required to take all the evidence, and during the course of the sittings, sixty-seven briefs were submitted and one hundred and fifty-four witnesses heard. The names of the persons and organizations submitting briefs and the names of the witnesses heard are attached as Appendix 1.

The evidence extends to 5,681 pages.

29 Witnesses appeared as Distributors.

70 Witnesses appeared as Producers.

39 Witnesses were consumers or represented consumers, for example, the Mayors of the Cities of Toronto and Hamilton, and the City Solicitors of Ottawa and Windsor.

6 Witnesses appeared as milk haulers, and 12 expert witnesses were heard on subjects ranging from the applicable legislation to nutrition.

CHAPTER III

Milk Control Board

The second item referred to me, namely the scheme contemplated by the provisions of the Milk Control Act, R.S.O. 1937, Chapter 76, as amended, and the administration thereof by the Milk Control Board precedes chronologically any examination of the milk and dairy industry as it exists today, and affords a background of some value in reaching conclusions regarding the circumstances in which the industry exists at present. The second item of reference is therefore dealt with first.

Origin of Legislation

Milk control legislation was a product of the serious business depression of the 1930's. As Dr. Roland W. Bartlett of the University of Illinois has pointed out in his valuable study of the milk industry in the United States, such legislation was primarily a result of the economic depression between 1933 and 1940. In the United States, during that time, some 26 states and the federal government enacted legislation to fix prices which consumers should pay for milk. In Canada, in the 1930's, most of the provinces enacted similar legislation to the Milk Control Act.

In Ontario the industry had by 1933 become completely disorganized. At that time, apart from considerations of continuing supply and maintenance of quality standards, the consuming public did not need protection or consideration by the industry, but the industry, including both producers and distributors, very badly needed protection from the consuming public which was consuming milk at retail prices substantially below any estimated cost of production at the farm itself.

The London, Ontario, market at that time illustrates this situation. The price structure which existed there for a number of years prior to 1932 had by 1933 almost entirely disappeared. Prior to 1932, there had been a recognized price structure ending with a consumer price of 11 cents per quart. The producer was being paid $2.12 per hundred weight of milk. Early in 1932 the price had decreased with great rapidity and by April of that year the farmer was getting $1.30 per hundred weight of milk and the consumer was paying 9 cents per quart.

Competition at the distributing end of the industry was extremely keen and practices such as the giving away of premiums with milk and the giving of a period of free milk to new customers were common.

While from an entirely short range view these practices may have been very satisfactory to the consumer, over any long range view they were ruinous not only to the dairies but to the farmers who produced the milk.

The situation became so serious that the then Minister of Agriculture, the Honourable Thomas L. Kennedy, appointed a departmental commission of inquiry which was asked to conduct an investigation for the following purposes:

(1) To determine the causes of the extremely low price of market milk in the city of London.

(2) To determine if this low price has resulted in any deterioration of the quality of milk sold in the city of London.

(3) To make recommendations regarding improvements in the situation.

Those making the enquiry consisted of a number of gentlemen representing various divisions of the industry. The city council of the city of London was also represented.

By the time the committee had gotten under way the situation had deteriorated still further and a brief excerpt from the majority report to the Minister succinctly sets out the situation:

> "In 1932 the mutually agreed price between producer and distributor was set at $1.30 per hundred pounds to the producer and a retail price of 9 cents per quart and 5 cents per pint. This price prevailed from August 26, 1932, to December 1st, 1932. During the last half of 1932 various abuses crept into the trade, such as: First—the giving away of free milk for a time as an inducement to new customers: and Second—the giving of premiums. This gradually precipitated a price war which became so disturbing to the general trade that a number of the distributors were forced to reduce the price to the consumer, thus forcing down the price to the producer. The price to the producer at that time was forced down by abnormal competition to $1.00 per hundred pounds and most of the pasteurizing distributors,—estimated at two-thirds of the trade and volume. —sold at 7 cents per quart and 4 cents per pint. with the balance of the trade selling at from 5 to 6 cents per quart at the present time.
>
> "It is reported that some distributors have paid for part of their milk on a surplus price basis, some of which was said to have been bottled and sold as liquid milk instead of being manufactured into by-products. This surplus price is variously estimated at from 85 cents per hundred pounds to as low as 50 cents per hundred pounds."

It is interesting to note that the majority of the committee suggested a fixed price as a result of their enquiry, to the producers, and also a fixed price to the consumer. This was objected to by the member of the committee representing the city council of the city of London, chiefly, I think, on the ground that he wanted as cheap milk as possible for the consuming public, regardless of the cost of producing and distributing it.

It was stated by witnesses during the present enquiry that in 1932 and 1933 other markets throughout the province were experiencing similarly depressed and demoralized conditions, and finally in the year 1933 the Milk Producers' Association approached the provincial government and asked for an act to regulate the fluid milk business, and to bring order out of the chaotic conditions prevailing.

The situation was not peculiar to Ontario, as apparently at the same time a similar situation obtained in Manitoba, Alberta and Quebec, where similar statutes were shortly afterwards enacted.

It is only necessary to read the report on the Reorganization Commission for Milk under the chairmanship of Sir Edward Grigg to realize that very similar conditions also obtained in Britain. These conditions were, of course, the result of a world-wide period of economic depression and distress. The whole price structure of the industry was in a state of complete confusion and in the result the first Milk Control Act introduced at the 1934 session of the legislature of the province of Ontario passed, I am advised, by the unanimous vote of the house.

I have emphasized the conditions which give rise to the first Milk Control Act, because in my view they have influenced the administration of the system ever since. One has only to read the provisions of the first Act, which was substantially amended in the years immediately following, to realize that what was desired was machinery which would permit the industry to organize itself on some rational basis including a rational price structure, bearing a reasonable relation to costs of production and distribution.

The matter was primarily looked at from the viewpoint of the industry itself which was asked through the agency of the Milk Control Board to establish itself on a proper basis. In view of the conditions which prevailed at that time, little thought seems to have been given to the position of the consumer, who quite naturally was taking advantage of the situation to obtain milk as cheaply as possible, and who was, in fact, obtaining it at prices at which it could not possibly be produced and distributed if costs were to be met.

As the present Chairman of the Milk Control Board said to me in his brief:

> "It can be fairly stated that the main object of the first and succeeding Boards has been to bring about the orderly marketing of milk, that is, to apply the Act in such a way as to provide conditions under which the various milk markets of the province will function effectively, economically, and in the general interests of society. To attain this main objective, the various Boards, each in their turn, have striven to improve the economic position of the producers consistent with a fair price to the consumer."

In one sense I think it can be said that the various Chairmen of the Milk Control Board have represented the public interest in carrying out their duties, and there is no evidence before me which would suggest that they have attempted to do anything else. Nevertheless, I think it can be fairly said ,that both from their composition and by their actions the various Milk Control Boards since 1934 have primarily devoted their attention to setting up and maintaining a stabilized and rationalized industry, and that the special interests of the consumer have not been given the weight later experience might have suggested was desirable.

Insofar as the efforts of the Board in respect to the industry are concerned I think it can be said quite fairly that the objectives with which this plan of regulation commenced have been realized. It was quite apparent on the hearings before me that the Producer and Distributor associations had reached an accord and had closed their ranks in the face of a critical public who wanted milk at prices they deemed unfair and insufficient.

In Appendix 4 and 5 there is set out the original Milk Control Act with amendments and changes down to the present time.

COMPOSITION OF BOARD AND GENERAL POLICY

While nothing was said in the original Act as to the composition of the Board in respect of the fluid milk market, the Board has been composed of a representative of the producers, a representative of the distributors, with a Chairman appointed by the government of the day, who has generally been a permanent civil servant.

In administering the Act the various Boards have consistently taken the stand that the producers and distributors should endeavour to arrive at prices and trade practices on a voluntary basis. To bring this about the Board has encouraged and recognized local and provincial industrial associations and the Chairman of the Board was able to tell me that this policy has resulted in practically all the cities and towns in the province having local producer and distributor organizations affiliated with central organizations representing their interests.

The organization representing the producers is the Ontario Whole Milk Producers' League, while the distributors are represented by the Ontario Milk Distributors' Association.

During the eleven or twelve years in which the Act has been in operation the industry has for the most part functioned in accordance with this policy of self-regulation.

Up to a short time before this investigation commenced, the Board proceeded on the assumption that it had power to fix prices under section 4 of the present Act, and as a result of this belief, up to the fall of 1946, there were a number of price orders by the Board, the majority of which were the result of producer and distributor agreements. A record of the orders issued by the Board is set out in Appendix 6.

In instances where voluntary agreements were impossible the Board arbitrated the dispute and issued arbitrary orders on producer and consumer prices .

As the years have gone on there has been apparently less tendency to agreement between the producers and the distributors, and as Appendix 6 shows, the number of orders imposed by the Board on producers and distributors has increased. This was particularly true after the outbreak of the recent war and reached its height in 1941. It was apparently adjusted by the year 1942, when the industry had settled down to the conditions under which it had to operate, and by which time the producers and distributors had each realized the position of the other in respect of costs.

According to the evidence of the present Chairman of the Board, in addition to the Board members the staff consists of a general secretary, an office staff of three, and two groups of field men aggregating ten in all.

The work of the first of these groups consisting of eight men consists of check testing to see that the regulations under the Act are observed with respect to weighing, sampling, butter-fat testing and the correctness of payment for milk supplied by producers.

The second group makes specialized investigation into irregularities of a major nature reported by the field men in group one or arising from complaints by either producers or distributors.

Against this should be put the fact that there were licenses issued in the year 1946 to 635 regular distributors, to 346 producer-distributors and to 83 milk peddlers. The possibility of doing even an adequate spot checking with a staff of this size in a field so large seems to be asking more than can be reasonably expected.

I think, therefore, it can be fairly said that at no time has the Board had sufficient staff to enable it to adequately investigate either the cost of producing fluid milk on the farm or the cost of distributing the same by the various dairies, and apart from some spot checking of financial statements of distributors for the Board by auditors it was not until the year 1946 that a serious attempt was made by the Board to arrive at any conclusions in this respect. The previous negotiations and agreements as to price, which the Board confirmed, and the orders which the Board made as to prices, were based on representations to them by the producers, who, in my opinion, at no time have had any adequate knowledge of their costs, and by the distributors in the markets concerned, who probably had a very good idea of their costs. The situation as to knowledge of costs will be dealt with in greater detail later in this report.

In saying this, I do not intend to criticize the administration of the Board which I think has done the best it could with the facilities afforded it, but it is amazing that the system has functioned as well as it has.

As I think will be demonstrated later in this report, it is quite obvious that farmers as a group, or as individuals, do not know their costs of production, and there is the widest variation in costs as between individual producers.

As appears by the first report of the Milk Control Board for the year 1934, after the setting up of the Board, producers and distributors in the various markets of the province began to take advantage of the powers given to the Board and price agreements in many cases were arrived at. Even in the early stages of the Board's work, wherever possible the Board simply approved agreements between producers and distributors and by 1946 as appeared from the evidence submitted before me, it could be fairly said that most of the principal markets of the province were covered by agreements in which prices paid to producers and prices paid by consumers are fixed either by agreements approved by the Board or by Board orders.

While in 1946 some question as to the Board's authority to fix prices under section 4 of the Act was raised by the law officers of the Crown, prior to that time, during the twelve years of the Board's existence a fairly substantial and widespread price network had been built up under its authority over the entire province.

As the Chairman said in his brief to this Commission:

> "It can be seen that the Board's policy on prices has been in the main to have the industry on a self-regulatory basis but when an impasse has occurred the Board has used its powers to regulate prices."

ADMINISTRATION OF THE MILK CONTROL ACT BY THE BOARD

It is not practicable to deal with the year by year administration of the Board except the work done during that time, which illustrates certain general tendencies which have developed in the Board's work.

The principal tasks of the Board have been two-fold: Firstly, the exercise of judicial functions, that is, the dealing with the granting and revoking of licenses and the policies connected therewith; and, secondly, the general administrative functions of the Board.

It is proposed to consider these two aspects of the administration of the Act separately.

Despite this separation it is only fair to comment that the administrative policy adopted toward the industry and in respect of it has very frequently coloured the judicial aspect of the Board's work. An example of this is found in the fact that in the opinion of the Board there were too many persons in the distributive side of the industry and in consequence of this it has been the policy of successive boards to refuse new licenses for entry into the business except in cases of most obvious necessity.

In the report to the Minister by the Board for the year 1939 covering work done in 1938 under the heading of "Consumer Services Rendered to the Industry" it was said that the Board had done much to carry out the purpose for which it was constituted, that is, to do—what the industry itself could not do—to bring about a rationalized fluid milk distribution in the Province of Ontario.

One of the results listed under this heading was as follows:

> "The consistent use of the Board's authority to refuse to issue new distributor licenses, or to extend the territory covered by existing licenses unless in the Board's opinion such issuance would be in the public interest has done more to rationalize the industry than any other action."

This statement reiterates what is set forth as a definite Board policy in the report to the Minister for the year 1937, where it is stated:

> "The general attitude of the Board towards licenses is that there are already too many licenses in effect in most markets of the province and that the issuance of more licenses will react ultimately to the disadvantage of both the producer and the consumer as a result of increased overlapping and duplication of services."

THE JUDICIAL FUNCTIONS OF THE BOARD

As presently constituted the Milk Control Board is an administrative body exercising judicial functions. It must license all persons who directly or indirectly engage in or carry on the business of distributing, transporting, processing or selling milk. To refuse or cancel such a license is to refuse or prohibit the carrying on of business in the industry. The provisions upon which licenses are granted are set out in section 5 of the Act, as follows:

> "No license shall be granted to a milk distributor unless the Board is satisfied that the applicant is qualified by experience, financial responsibility, and equipment, to properly conduct the proposed business, and that the issuance of a license is in the public interest."

Section 6 is also of interest, and provides that subject to the provisions of section 5 the Board may refuse to grant or renew licenses or may suspend or revoke licenses already granted after due notice and the opportunity of hearing applications, when the Board is satisfied of three conditions; viz.: the failure to carry out and perform the provisions of certain public statutes relating to milk for human consumption, failure to provide for and continue the proof of financial responsibility, and failure to observe and carry out regulatory orders of the Board made under the Act.

It is provided by section 9 of the Act that an appeal shall lie by way of originating notice from any order or decision of the Board made under section 5 or section 6, to a judge of the Supreme Court, and it is provided that he may receive evidence and give directions for the conduct of the proceedings and may make such order as he deems just. There is no further right of appeal.

The files relating to application to the Board for licenses were made available to me and an examination of them covering years 1934 to 1946, inclusive, reveals the manner in which this function has actually been exercised. Generally speaking it can be said that for the first five years the Milk Control Board was thoroughly engaged in stabilizing the industry and becoming acquainted with the type of problem to be faced with respect to licensing. When the Milk Control Act first came into force in 1934 licenses were issued to all existing distributors and producer-distributors with the exception perhaps of a few very small operators who may not have come to the attention of the Board at once.

In the first few years the Board leaned very heavily on local producers and distributor associations in the matter of licensing existing operators or in dealing with new applications. Certainly, in the first two years the

Board was extremely reluctant to take advantage of the punitive sections of the Milk Control Act when infringements of the Act were clearly taking place. Very considerable effort was devoted to securing compliance with the letter and spirit of the legislation by discussion and correspondence even when it was clear that milk was being distributed without licenses and in open defiance of the Act.

By 1939, however, the Board appears to have felt that it was in a position to consider the industry stabilized and to deal with new applications in what appears to have been a very rigid manner. In fairness to the Board it should be said that the prime consideration in dealing with new applications for licenses seems to have been the adequacy of existing facilities as furnished by persons already licensed. If, in the Board's opinion, the market was already adequately served, licenses were refused as a matter of course. Similarly, if there was any evidence that the applicant was not financially responsible, or proposed to make raw milk available to an area in which compulsory pasteurization was enforced, applications were refused on these grounds.

No criticism is offered of the grounds on which the Board purported to base its decision, but the method of arriving at these decisions cannot in any sense of the word be said to have been judicious and in some instances methods were employed to arrive at a decision which can only be considered as improper.

From the records made available to me, it would appear that no guide was furnished to the applicant as to the type of evidence which he should submit to show public necessity or convenience for the granting of a license to him, with the result that when such evidence was not produced, the Board without hesitation held that in the absence of such evidence applications must be refused.

In some cases notices of the refusal of licenses were given to the applicant without any opportunity being afforded to him to attend and state his case, although such action is contrary to section 6 of the Milk Control Act.

In other cases, applicants for producer-distributor licenses, who would operate in a very small way, have been invited to attend a hearing in Toronto when such was obviously impossible financially for the applicant. This applies particularly to persons applying from the extreme north-western section and other distant parts of the province, for whom a trip to Toronto would involve travelling upwards of 3,000 miles. The failure of the applicant to appear on a hearing after being notified to attend was invariably used as a reason for finally refusing his application.

There is strong evidence in the files to substantiate the impression that where any applicant for a new license was opposed by an existing licensee, especially if such licensee was an operator in a substantial way, that the new applicant was certain of refusal.

In one case an application was made by a person who had been in the distributing business, for a license to commence operations in a substantial community in Northern Ontario. At the time of the application there was only one licensee, a subsidiary of a very large company. The original application was supported by the local authority and the applicant was advised of the approval of his request. Subsequently and within a very short time, affidavits were filed in the office of the Board by an officer of the existing licensed company accusing the applicant of improper practices in his previous business. As far as the files show, no effort whatever was made to examine witnesses making these depositions before the Board, and the applicant was notified to suspend operations. An employee of the Board was then despatched to the community, and his report shows that, while the witnesses were prepared to state their evidence to this employee of the Board, they did not want to become further mixed up in the matter. His report, however, says that the applicant was highly spoken of, and from all appearances was a reputable person. This employee of the Board then makes the astounding recommendation that the applicant be required to furnish financial responsibility bond in an amount known to be in excess of his capability and far in excess of the normal requirement in order to avoid any suggestion that the Board was acceding to the representations of the existing licensee. This novel suggestion was not adopted by the Board but the application for the license was forthwith refused and the existing licensee remains the sole distributor in the community.

The entire procedure with respect to dealing with applications for licenses should be reviewed and a system instituted which will result in the Board having all the facts before it and in the applicant knowing at the time of his application precisely what he must prove in order to receive consideration for the granting of a license.

In very few cases was any investigation of the local conditions carried out and refusal of licenses seemed to have been almost a matter of course. If the applicant were required to fill out an exhaustive questionnaire with respect to the size of the market, the present facilities and his own financial responsibility and experience in the industry, with his attention specifically directed to the question as to whether or not the market was large enough to support an additional licensee, much of the present unfair method of dealing with this matter would be eliminated. In addition, when the Board was of the opinion that in the absence of further evidence it must refuse the application, then some real opportunity should be provided for the applicant to state his case orally, and not merely to appear to be given such opportunity as seems to have been the situation for the last nine years. In respect to the Board's power to cancel licenses and its power to deal with infractions of the Milk Control Act regulations and Board orders, an examination of the files of the Board indicates that throughout the Board has endeavoured to secure by every possible means short of exercising its full power compliance and co-operation of licensees with the regulations. In those cases in which more drastic action has been taken it can be said that such action was abundantly necessary and appeared to be the only method of enforcing the orders and regulations.

It should be observed that one of the factors that influenced the Board in approaching the problem in this way was that a licensee invariably had a substantial part of his capital and livelihood involved in the business and every effort was made to protect him from the consequences of his failure to observe the regulations.

It is, of course, a matter of great difficulty to disassociate policies of bureaucratic administration from the exercise of judicial functions when they are vested in the same persons. It is nevertheless very desirable that there should be a distinct cleavage between the two. It is perhaps asking too much that the Milk Control Board, in its judicial functions, should be able to look with complete detachment on its administrative policies and practices when it is called upon to deal with the granting or cancelling of licenses or other disciplinary matters within the industry which it is required to regulate. Such a confusion of administrative policy with judicial function is a natural consequence of the practices which have prevailed, but it seems to me to be in the public interest that in future there should be a division of such functions. One possible solution is to adopt the practice taken under the Insurance Act which provides for the setting up of what is called an advisory board. This provides that the Superintendent of Insurance, when so requested in writing by an applicant or licensee, may nominate an advisory board which in that case consists of a representative of the Superintendent, who is Chairman, and a representative of the other interested parties, mainly the insurers and the agents. If some such similar device could be used by the Milk Control Board with appropriate changes to suit the conditions of the dairy industry, I am satisfied that there would be a much more judicial determination of the problems with which the Board has to deal in this respect, and the whole problem of disciplining and licensing would be dealt with in a more impartial and objective manner.

In my view, it is quite impossible to fairly combine powers of bureaucratic administration with those of a judicial nature in the same person with any hope of dealing impartially with the subject's rights.

THE ADMINISTRATIVE FUNCTIONS OF THE BOARD

Apart from the oral evidence of the Chairman and other witnesses who had been members of the Board, much assistance in valuing the accomplishments of the Milk Control Board is obtained by a perusal of the annual reports of the Board to the Minister of Agriculture. These reports cover the period from the time of the establishment of the Board down to the present time and have substantially corroborated the impression I gained from the other evidence as to the scope and general nature of the Board's activities.

It must be remembered that the Board was constituted, as I already indicated, in a period of stringency, when the position of the producers for the fluid milk market was nearly desperate and the industry in general was completely disorganized. It must also be realized that in all, insofar as personnel is concerned, there have been nine different boards, and that while there is a fairly continuous thread of policy through the entire period of operation, the policies and aims of the Board have undoubtedly been influenced from time to time, as one would expect, by general government policy. It should also be noted that, apart from the Chairman, who theoretically is independent, the Board is composed of individuals actively engaged in either the production, distribution or processing of milk.

The view taken by the Board in its second full report, which was made in the year 1936 and covered the year from March 1935 to the succeeding March, indicates, I think, the basic policy pursued by the Board since that time and is worth setting out. At that time it was said:

> "In all its work the Board has kept in mind the primary purpose of the legislation creating it, and has worked steadily for improvement of the position of the milk producers so long as such improvement could be obtained without undue hardships being placed upon the other two interested parties, the milk consumers and the milk distributors."

That this was recognized is evidenced by a further quotation in the annual report of the Chairman of the Ontario Whole Milk Producers' League, given at the Annual Convention of the members of the League:

> "The work of the Milk Control Board of Ontario, with the added strength given it by the amending of the Act, has tended to stabilize the

market and has eliminated many of the evil practices which, without it, would have broken not only the local market but the whole provincial structure."

The Board was able to report that as a Board of referee or arbitration it had avoided difficulties in several markets, and from the state of chaos existing in the industry in 1933 there had been a change to a state where reasonable order and prices had been established in many markets on a fairly satisfactory level.

This was accomplished by the Board pursuing its work along four definite lines:

(1) The licensing of milk distributors.
(2) The bonding of milk distributors, who purchased their supplies of milk from milk producers.
(3) The approval of agreements arrived at between producers and distributors.
(4) The handling of certain miscellaneous problems which arose from the operation of the other three policies.

It was quite obvious that what was being done was to force the industry to set its own house in order, and even though it was also obvious to the early Boards that certain economies in the operation of the industry might improve the situation, even at that time no great pressure was exercised on the industry to bring this about. As was pointed out in the first report, one of the most important expenses in milk distribution is the cost resulting from the loss of bottles, and it was suggested that if bottles were charged for, much of these bottle losses would disappear. No definite action was taken, however, to bring this about.

It also appeared at that time that the Act needed certain amendments to give the Board somewhat larger powers and substantial amendments were passed at the 1935 session of the legislature. The original Milk Control Act and the various amendments that have been made are set out in Appendices 4 and 5.

LICENSING FROM THE ADMINISTRATIVE SIDE

Initially it was the view of the Board that there were too many milk distributors in the business, and in consequence of this belief new licenses were issued very reluctantly. In the year from March 1935 to March 1936 some 1,624 licenses had been issued to milk distributors.

The view was taken that public interest coincided with the interests of the industry as a whole, and that if there were too many engaged in the industry it was considered part of the Board's function to remedy this situation.

It had been provided by an amendment to the Act in 1934 that new licenses should be granted to milk distributors only if the Board was satisfied that the applicant was qualified by experience, financial responsibility and equipment, to properly conduct the proposed business and that the issuing of a license was in the public interest. It is, I think, arguable, whether an overcrowded industry insofar as distributive outlets are concerned is in the public interest or not, but for better or for worse, the Board apparently took the view that it was not and has clung to that point of view ever since without attempting to force a reduction in the number of distributors. This is emphasized time and again in the reports of the various Boards and as the section of this report dealing with the exercise of this function, which is a judicial one, indicates it has been carried on in a manner which precluded any real consideration of the merits of individual applications. The result has, I think, been actually to improve conditions in the industry. It has, of course, also substantially reduced the number of competitors within the industry itself. There are approximately 170 communities with a single distributor licensed. For the most part these are very small, but 29 communities have populations between 1,000 and 2,000, six have populations from 2,000 to 3,000, and Copper Cliff with a population of 3,732, and Sturgeon Falls with a population of 4,576, complete the list of larger communities where a complete monopoly exists.

In 1936 the licensing of milk distrbutors was done on a basis of a division into three classes which are known as regular distributors, producer-distributors and milk peddlers. The terms are reasonably self-explanatory: the regular distributors being those persons, partnerships and corporations, selling milk commercially: producer-distributors being those who not only produce the milk but later on distribute it; the milk peddlers being the small class of persons who have grown up mostly during the depression years and who purchased milk as a rule from other processors and distributed it personally along limited routes.

By March, 1936, the Board was able to say that the licensing of milk distributors in the province selling more than 20 quarts a day was practically complete, and that 99½ per cent of the distributors had complied with the bonding requirements under the Act.

Exceptions to this policy were those distributors whose payment to producers are on a weekly basis or who, at no time, owed producers more than $100.

The list of licenses issued appears in detail as Appendix 3.

While the Board initially took the position that, under the Act, it had no authority to actually set milk prices except when called upon to arbitrate a price dispute, it nevertheless had authority to approve all agreements between producers and distributors, and by 1936 some seventy markets in the provinces had agreements which were so approved. This included most of the larger markets in the province and many of the smaller ones.

Also by 1936 the provisions of the Act relating to consumer representatives from municipalities concerned in any particular market had come into being, and the Board seemed to feel that each agreement was considered in the light of fairness to all persons concerned, including consumers as well as distributors.

CONSUMER REPRESENTATION

From the evidence before me I would be somewhat dubious as to whether consumer representations were as effective as these reports would indicate. Every consumer representative that I heard, including the Mayors of Toronto and Hamilton, gave me the general impression that as a rule the Board did not disclose to them sufficient facts to enable them to come to any intelligent conclusion on the problem with which they were asked to deal. Confidential information in the possession of the Board as to the position of both producers and distributors was apparently not disclosed to them, and in my view the intention of the Act in giving consumer representation has been largely defeated by the administrative policies adopted, and has in fact been an empty procedure.

GENERAL PROBLEMS OF ADMINISTRATION

Quite early in its administration, and definitely by 1936, the Board had established a system of special audits of distributors' books where there was some suggestion of error or under-payment to producers, and in that year, in collaboration with the Ontario Department of Health, a scheme was devised to create better sanitary conditions in the plants of milk distributors.

Up to this point the achievements of the Board had been concerned chiefly with the bonding provisions of the regulations under the Act and the auditing in cases where it seemed indicated, with the result that producer losses from unpaid accounts were reduced to a minimum, and owing to rationalization of the principal markets price improvements gained were maintained for the benefit of producers.

As early as 1936 it was realized apparently that some effort should be made to find out accurate costs of producing and distributing milk and to provide for more complete and uniform records in the dairy plants. I will allude to this later on but I am simply pointing out here that the necessity of this was realized as early as 1936.

It was also recognized that some steps should be taken to stop uneconomic practices such as special deliveries, small wagon loads, overlapping of distributor service and bottle wastage. However, none of these uneconomic practices were dealt with until the year 1942 under the stress of war conditions, and some of them have not yet been dealt with.

As will appear from the various reports of the Milk Control Board, while the need for these things was recognized periodically, the industry was apparently expected to bring them about itself and it failed to do so. No sufficient pressure was exerted by the Board to establish and maintain accurate information as to costs or any uniformity of accounting practice among distributors, and indeed such records are not yet available. In the same way no special pressure was exerted by the Board to deal with such matters as overlapping of distributor service, which matter remains to be dealt with.

I mention these things merely to emphasize the point that the Board functioned along limited lines and that what it attempted to do was to let the industry rationalize itself. It did not attempt to step in and force improvements before the industry was ready to accept them.

It can be argued that this is a sound policy, and with the experience of the last twelve years before me I am somewhat hesitant to condemn it entirely. However, in the future if cheaper milk is to be sold in Ontario, greater pressure along these lines will have to be exercised by the Board or whatever governmental agency is regulating the milk industry as a whole.

By 1937 a complete system of licensing and bonding of distributors was established and there were price agreements in effect in all the larger markets in the province. The position of the producer, which was the initial concern of the Board, was now on a much sounder and more substantial foundation than it had been before the Board commenced its work. It was said that farmers' losses from unpaid milk accounts had been practically eliminated, that producers were no longer compelled to purchase stock in a dairy, and practices which produced disorder in the distributing end of the business, such as the giving of premiums, had been ended; that increased overlapping of milk trucking routes had been halted, and when cost increases arising from changes in the feed situation made the position of certain producers untenable, the relief was affected through the mediating agency of the Board, without a large increase to the consumer.

About 1937 more attention was paid to the situation in respect to the trucking of milk from the farms to the distributing centres, which is a very serious item in connection with producer costs, and in the Toronto market a Milk Transport Committee was set up with the idea of preventing duplication of service and overlapping.

Apparently in that year some sort of attempt was undertaken to make a study of the profit and loss statements of a selected list of distributors to reach conclusions as to costs of operation, but no very significant conclusions were reached. Bottle losses were considered and it was suggested that legislation preventing the use of one dairy's bottle by another might be enacted. The economy of a standard bottle had not yet been a matter of consideration.

The following quotation from the 1937 report may indicate something of the thinking of the Board in regard to the industry at that time. It was stated: "that the control of the milk business should not be carried to the stage where business initiative is prevented, and the question of consumer prices was considered. It was concluded, however, that the present system of control had eliminated many of the abuses in the industry and that there were still many uneconomic practices which could only be corrected by a fairly rigid control."

In May, 1938, the present Chairman of the Milk Control Board was appointed and his first report as Chairman of the Board presents one of the most complete and effective accounts of the Board's work and policy available. At that time the Board had been in operation for some five years and its lines of policy were fairly well defined.

There is nothing in the evidence before me, and I heard not only the present Chairman but others who have been members of the Board from time to time, to suggest that there has been any great change in policy in the lines defined at that time and discussed in the report of the Boards for the years 1937 and 1938. The basic control exercised by the Board was that of licensing. In respect of this it was observed, and I do not think the view is any different today, that:

> "The ridiculous extension and consequent overlapping of distributive services which was so evident prior to 1934 had been halted and some improvement secured."

It was stated that the Board had refused to issue any new licenses, or to extend the territory covered by existing licenses unless it could be proved that the service the applicant intended to give was needed in the public interest, and in 1938 the number of licenses issued as a result of this policy was some 223 less than those in effect in the previous year. It was stated that few licenses had actually been cancelled, but that licenses surrendered through amalgamation or failure had not been replaced.

It has also been considered that the bonding of milk distributors is one of the major responsibilities of the Board, and while such a system is not a complete guarantee to producers against loss under all circumstances, it has unquestionably helped them. I am advised that since the Milk Control Board came into being, that as a result of the bonding provisions, producers have been saved directly a total of $55,000.00. The chief value of bonding is said to be that it not only prevents irresponsible operators from commencing operations as milk distributors, but that in effect the bond makes the producer a preferred creditor and often a personal creditor of the dairy operator, and that in practice it has been found that the dairy operators make every effort to meet their obligations to their producers rather than to permit the bond to be called upon. In this respect see Appendix 7.

It is a tribute to the arrangement that while the coverage by the bond is limited and covers only one payment period plus an extra period of approximately two weeks, the general result has been so satisfactory.

PRICE FIXING

From 1936 to the latter part of the year 1946 the Board considered that it had the power to fix prices pursuant to section 4 of the Act. As previously suggested, serious doubts have been thrown upon this power, but if the milk industry is to be controlled in any measure it would seem essential to me that the Board should have such power. although there may be many times when it should not be exercised. In any event. since the question had not been raised up to that time. the Board proceeded on the assumption that it had such power and in consequence milk marketing agreements were approved in most of the fluid milk markets in the province. and also in most cases between producers and processors in the concentrated milk field.

At the end of 1937 it was said that the milk produced on about ten thousand Ontario farms was sold to consumers at regulated prices in all the important urban centres throughout the province.

At the end of 1938 there were some 60 approved agreements in force and there were 31 unofficial agreements in force which actually resulted from the authority which the Board wielded.

The Board also carried on a system of check-testing. the Department of Agriculture staff of milk check-testers being under the supervision of the Board. This was combined with a system of spot auditing with respect to payments to producers and apparently some attention was being given by the Board to the rationalization of milk transport.

The Board's general policy towards the industry. upon which I have commented before. has been. I think, frankly to bring about a rationalized distribution of fluid milk in the province of Ontario. and wherever possible this has been left to the industry itself to work out. In doing so the Board has not brought pressure on the industry to effect improvements which might drastically improve the efficiency of the industry. but has merely urged these improvements and changes on the industry with the hope that those engaged in it would themselves adopt them. The Board's administration may be fairly summed up by saying that it has been primarily concerned with creating a stabilized milk price structure in the major milk consuming centres of the province. to which end the economic position of the producers has been a prime consideration. Unquestionably some attention has been paid to the consumer position in the matter. although it appears to me that consumer representation has not been a very effective factor in the Board's deliberations.

By a system of check-testing of milk and auditing. payments to producers have been kept at a reasonably accurate level; by the bonding of milk distributors. producers have been given a further protection. In its attitude to new entrants to the business the Board has done much to cut down what appeared to be the overcrowded position among distributors and it apparently has taken a consistent position that it is not in the public interest to allow fresh entries into the business. The way this policy has operated is commented upon in a previous section of this report dealing with the judicial functions of the Board.

This stabilization of the industry has also been effected not only by fixing the price paid to the producer but by fixing the retail price at which the distributor can sell to the public. By these means the distributors have known precisely what their margin was and they have been relieved of the cost of competing with price-cutting competitors. In respect to the position of the producers. the fixed price has given them a more stable position as they now know that the distributor cannot purchase milk more cheaply from some other producer. Many other features which might ordinarily be evidence of competition between distributors, such as the giving of premiums, cutting of prices and so on, have, as a result of these policies, been made illegal.

Trade associations have been encouraged and the Board has leaned heavily upon them, and while it is admitted that neither the producers nor distributors associations are entirely representative. the Board has apparently been satisfied to lean on them in the rationalization of the industry as if they were in that position. The matter is fairly summed up in the 1938 report in the following words:

> "In other words. it is the Board's opinion that the principle of the trade doing everything for itself that it could do is the correct one; and that the Board's place should, increasingly, be to carry on only those activities that the trade finds itself impossible."

In later years, and with the coming of the war. conditions changed somewhat in that there was greater pressure on both producer and distributor because of the fact that their costs began to rise. By the end of 1941 price control came into operation on a dominion-wide basis. and it is stated that the milk industry was then in a position where production costs, plant costs. and distribution costs had materially increased without comparable increases in the price of the product sold.

ECONOMIES IN TRADE PRACTICES

Under the pressure of this situation and initially at the instance of the Wartime Prices and Trade Board. certain economies which had been discussed by the Board since its inception. but which had never been acted upon by the industry. were adopted. apparently with general consent.

The changes were worked out by consultation with the distributing end of the industry, and the following table sets out exactly what was done:

> "July 1. 1941:
>   Special deliveries eliminated.
> February 1. 1942:
>   (a) Cream sales limited to two grades.
>   (b) Cream containers limited to two sizes.
>   (c) Store returns eliminated.
>   (d) Delivery service limited to one per day and to regular wholesale accounts.
>   (e) Special bottle caps eliminated.
> July 3. 1942:
>   (a) Charge milk bottle made universal.
>   (b) Retail sales established on a cash basis.
>   (c) Wholesale credit sales reduced."

The Board also found itself in the position. where. as it expressed it in one report, it had a new field of service. namely. the interpretation to the Wartime Prices and Trade Board of the opinions and needs of the producers and distributors. and in turn the interpretation to the industry of the rulings and opinions of the Wartime Prices and Trade Board.

In 1942 subsidies were paid by the Dominion Government. and this added greatly to the work of the Board's field staff. This additional work was done without additional staff.

Possibly one of the best ways of setting out the sort of work the Board did is to take what they themselves set out in their report for the years 1944 and 1945. These reports show the extensive work of inspection and payment checking carried on. and are as follows:

	1944	1945
Milk samples tested	29,156	25,397
Errors corrected	408	358
Value of errors corrected		$1,922.49
Periodic milk receiving reports: (showing methods used for weighing, sampling, testing, etc.)	375	388
Periodic milk payment reports: (showing date and accuracy of payment, statements used, etc.)	876	860
Periodic reports on producer-distributor operations	353	
Miscellaneous visits at farms		175
at plants		919
others		201
Special complaints investigated		202
Mileage travelled	100,532	144,828

In addition to the routine inspection work shown above, a great deal of detailed auditing of producer payments was completed:

	1944	1945
Payment checks made	772	722
Errors corrected, Number	45	39
Value	$4,893.25	$11,208.79
Producer subsidy claims checked	905	698
Errors corrected, Number	56	13
Value	$428.72	$527.54
Consumer subsidy claims checked	982	569
Errors corrected, Number	72	24
Value	$4,284.83	$1,446.88

GENERAL OPINIONS AND CONCLUSIONS

It is apparent, I think, that the Board set itself certain limited objectives and that in a fair measure these have been achieved successfully. Problems affecting the economies of distribution and the necessity of ascertaining the actual costs of distribution were fully recognized by the Board, but even yet, I think, it may be fairly said that no comprehensive study has been set up which affords a basis for accurately and readily determining these important facts.

Similarly, the position of the producers is equally obscure. Apart from the studies made by Mr. H. R. Hare, and which were concluded in 1939, the Board has little information, in my opinion, as to actual producer costs.

The result of this situation will be gone into more thoroughly in the chapters dealing with the position of the producers and the position of the distributors later in this report. Nevertheless, if controls are to be exercised or enlarged, it is surely essential to find out, as a basis for any price determination, what the actual costs involved are.

This statement is not necessarily a criticism of the Board as it presently exists. It may well be that with the staff and equipment at its command, effective studies of this sort were not practicable.

It would seem to me, however, very desirable that in future they should be undertaken.

Similarly, if the public are to obtain, as I think they are entitled to obtain with such a vital product as milk, a good product at the cheapest possible price, it is desirable that in an industry in which competition has been practically eliminated by government regulations, any further steps which may tend to cheapen the costs of handling the product should not merely be suggested to the industry but should be demanded of them as part of the price they pay for the protection they are receiving.

As will appear from the chapter on the position of the distributors, the accounting practices in the distributing end of the fluid milk industry are varied and in many cases obscure. If prices are to be fixed to the public, it is surely desirable that some uniform system of accounting should be pressed on the industry, which will enable the government agency regulating the industry to readily understand the position at any time when it is deemed necessary to have such understanding.

These, however, are matters which possibly the Board should now enlarge its policies to include. In summarizing its work and administration to date, I am of the opinion that while a fairly rigid industry has been set up to which entry by outsiders has been generally denied, the rationalization of prices which was hoped could be achieved when the Act was passed in 1934 has in the main been realized. Prices much more satisfactory than those previously obtaining have been obtained for producers. Steps have been taken which enable them to be reasonably sure of payment for their product and the price of the product to the public has been fixed to the distributor so that he knows with some certainty the spread on which he has to operate.

As I stated before, the number of persons in the business has been drastically curtailed and for practical purposes new entries have been eliminated.

As will appear from the subsequent chapter on the regulations affecting milk, fluid milk as a food product sold to the public has become virtually standardized, and in the result I think it can be said that the only field of competition left within the industry is one concerning the service which they can render to the public.

These results have been achieved, not by forcing them on the public, but by a continuous pressure which apparently at no time has become too insistent, and in the result the present situation has been achieved primarily by agreement of the larger part of the industry itself.

In view of the present costs of fluid milk, however, it may be questioned whether this process of letting nature take its course can be pursued with the same devotion, and it would seem to me that the work and scope of the Board should now be liberalized and enlarged.

To date the prices arrived at both for producers and distributors have been candidly guess work. The fact that the guess work has been moderately successful does not, I think, alter the fundamental nature of the situation. To illustrate, it became apparent quite early in the enquiry that there is a very great variation between the costs of various producers. These arise from many factors, such as crop growing conditions, fertility of the producers' farms, cost and efficiency of labour. weather conditions insofar as they affect feed grain supplies on the producer's farm, efficiency of herd management, costs of purchased feed. and the geographic situation in which the producer finds himself in relation to his market. It is obvious. I think, that the best that can be done in the way of fixing prices for the producer. is to attain a figure which will give an efficient producer a reasonable reward for his efforts but will still encourage the not so efficient producer. This is essential if a continuous and adequate supply of fluid milk is to be obtained in any market.

What has to be done of necessity is to fix an average price taking costs on a wide scale and finding a middle price somewhere which gives a reasonably efficient farmer a fair return.

It was quite apparent from the evidence before me that despite the efforts of producers to assess their costs, in many cases such costs were prepared under tutelage for the purposes of the enquiry, and that certainly before the enquiry the farmer in question had no real idea of the cost of producing one hundred pounds of milk. There is undoubtedly an obligation on a class of producers whose price is fixed on a basis which will give them a fair return, to produce their product as economically as possible, if they are going to receive the continued protection of government authority. It would be desirable if, as a class, producers knew more accurately what their costs were.

As will appear, however, in the section of this report dealing with producers, the difficulties of dairy farming in the last five or six years have been enormous. Costs have been constantly fluctuating and on the whole have been steadily increasing. Nevertheless it is, I think, fair to say that neither the Milk Control Board nor the individual producers at any time have had sufficiently accurate information on which to base any opinion as to cost. As will appear later, certain very valuable studies were conducted up to the outbreak of war under the auspices of the Dominion Department of Agriculture, by Mr. H. R. Hare, of that department, and his study of four years milk production in Ontario was constantly referred to by the producers before me. Nevertheless, I think Mr. Hare would be the first to recognize that the elements entering into producers' costs are so variable and so fluctuating, that it is impossible to use a study completed in 1939 as an accurate guide to the determination of such costs at the present time.

The factors entering into the determination of the producers' costs even as I have enumerated them, obviously are subject to many changes from year to year. For example, there may be improvements in methods such as improving pasturage, improvement in feeds and feeding methods, an increase in the production per cow and for the whole herd: all these things may change the relationship of the results found by Mr. Hare in 1939, and some continuous study of producer's costs would seem to be a primary necessity for any milk control board in the future. There are a number of ways in which this could be done and these will be dealt with later in the chapter relating to producer costs, but a study, even on a very limited scale, should undoubtedly be undertaken.

While the principle enunciated by the Milk Control Board in its 1939 report of letting the industry regulate itself, was, I think, from their viewpoint at that time, a sound one, nevertheless under the conditions I have found any costs set forth by the producers must have been more or less guess work.

On the other hand, despite the great variation in cost between the various distributors, which will be alluded to later, it is fair, I think, to say that as a class the distributors are in a much better position to know their costs, and consequently one must observe that the bargaining that took place was very heavily loaded in favour of the distributors. It is amazing that it has worked as well as it has.

The only possible basis for determining producers' costs is a continuous study with a fairly wide sampling of producers' costs from year to year across the province. It is recognized that as between say, Northern Ontario and Southern Ontario, there are certain very drastic differences, but no one year is a safe guide to the determination of such costs which depend on such factors as good or bad crops, the freight rates on Western feeds, and the price of farm labour.

It would, therefore, seem desirable that the Board be permitted to set up and conduct a comprehensive and continuous study of producers' costs over a period of years. A need for this was recognized in the early years of the Board's operations, but owing to changes of personnel and probably to the pressure of great demands on a small staff very little appears to have been done.

In stating this I do not wish to seem to be criticizing the Board adversely. It has been asked to administer and regulate a very substantial industry in the province, with a very small staff, and there is a limit to what human flesh and blood can do, but affairs have now reached a stage where it would seem most desirable that the work of the Board be enlarged and its own work, if I may say so, rationalized by setting up a proper basis for the determination of producers' costs.

The remarks above in respect of producers' costs apply in a somewhat more limited way to distributors. If the distributors are to continue to enjoy the benefits of fixed prices, not only for the purchase of their raw product but for the sale of their product, prices presumably must be fixed on a basis which allow a reasonably efficient distributor to continue in business whether his volume be large or small. It should also be based, not on guess work or a somewhat superficial examination of financial statements, which frequently I fear conceal more than they reveal, but should rather be based on a uniform system of accounting which all distributors should be required to maintain, and a continuous study of such accounting from year to year. If price fixing is to continue, this is the only rational basis on which to carry it on.

While it is specially important to secure accurate estimates of production and distribution costs, there are several other types of information which the Board should undertake to obtain and keep up to date if it is to be in a position to reach intelligent decisions in respect to prices. Any price established is likely to prove satisfactory to the extent that it reflects the supply and demand conditions which actually exist and, better still, the conditions which are apt to prevail during the period in which the price is expected to be operative. This suggests that any agency responsible for price determination should have as complete knowledge as possible of the direction and extent of the trends of the various factors which go to make up the supply and demand situation. A few examples may serve to indicate the specific nature of the information that is required.

ESSENTIAL STATISTICAL DATA

One of the things most needed is a series of indexes showing the latest developments and the general trends in the conditions of both agriculture and industry. More specifically the statistical information should show the general level of prices being paid by farmers for goods purchased by them, the general level of farm selling prices, the general relationship between the prices being paid and those being received by farmers, i.e. the situation in respect of farm purchasing power, the provincial farm income in general and that of dairy farming in particular, the existing stocks and production of the various kinds of hay and feed grains, the average prices received by farmers for the various home grown feeds, the average prices of the several types of purchased feeds, the average wages paid to hired farm labour, dairy cow and heifer numbers, and pasture conditions. In the same way it should include an index of the cost of goods bought by wage earners and lower salaried workers, an index of industrial employment or unemployment, and one designed to show the size of the industrial pay roll.

Another type of statistical data should relate to the general dairy price situation. In addition to the official whole milk prices it should show the average price actually received by whole milk shippers, i.e. the prices resulting when sales at surplus prices have to be considered along with those at the regular or quota price, the price of fluid cream, condensery products, cheese and creamery butter, the average prices received by farmers for milk sent to the condenseries, cheese factories and creameries and the differentials between these prices and those obtained for whole milk. Still another set of statistics should be provided to give a detailed picture of the situation in respect of whole milk production and consumption. They would show the total amount of milk going to all whole milk markets in the province, the amount going to each of the larger markets, the amount finally consumed as fluid milk in the province and also in the larger markets, the amount for which producers were paid surplus prices, the amount sold by distributors at wholesale and at retail, the degree of regularity of production, the actual number of producers and any net changes in the number. It might also be desirable to maintain maps showing the location and population of each of the more important markets together with the location and number of producers who supply these markets.

Information of the various types just indicated would provide a basic background in the light of which the price-making decisions of the Milk Control Board could be made with a reasonable degree of confidence.

As in the case of the information relative to cost of production and distribution, it would serve not as a final or sole determinant but as a very useful guide. In those cases where necessary statistics are already being collected by other governmental agencies, steps should be taken to secure and arrange them in the form best suited to the Board's requirements. Where the statistics themselves are non-existent, the Board should undertake the responsibility of securing them. While this sphere of activity might require a considerable expansion in the number of Board employees and the addition of some employees with special skill along statistical lines, such a development would appear to be necessary if anything in the nature of scientific price determination is to be undertaken. A good idea of the kind of information required can be obtained by examining the Compilation of Statistical Material prepared by the Dairy Division of the Surplus Marketing Administration of the United States Department of Agriculture. A recent issue of this material as it relates to the Chicago Marketing Area may be found in Appendix 8 to this report.

CONSUMER REPRESENTATION

One cannot go through the various reports of the various Milk Control Boards without realizing that they were very conscious of their obligations to protect the public, and by and large I think that result has been achieved by them. It has not, however, arisen out of the provision for consumer representation as presently provided by the Act.

Almost without exception in the evidence before me the consumer representative suggested that at no time were the facts and records in the possession of the Board revealed to them when they were asked to sit in on the fixing of prices in the market in which they represented the consuming public. They were in practice, it would appear, left on the outside rather than taken into the Board's confidence in that respect. This proceeding, if consumer representation is to mean anything at all, seems utterly irrational and fantastic. It was said that a great deal of the information was confidential, but it is surely quite possible to see that consumer representatives are sworn to secrecy in the matter and treat them with the responsibility which their position warrants. There was no actual evidence before me which would suggest consumer representatives as they existed were unworthy of that trust and confidence.

Normally in a Board of this kind the Board has been made up of a Chairman, presumably independent, a representative of the producers and a representative of the distributors as a group. The proper function of the Chairman of the Board would appear to be that of an independent person whose chief function was to represent the public interest for which the government appointing him is responsible.

Suggestions were made particularly by consumer representatives before me that there should be special consumer representation, and certain of the trade union representatives thought organized labour, apart from other consumer groups, should receive special consideration.

Unless the Board is to become completely unwieldly, it would not seem to me to be possible to differentiate between the various consumer interests in the community. They all have a common interest, and while it might seem desirable than an independent person representing the consumer interest be added to the Board, it would probably be safer to put that duty squarely on the Chairman's shoulders.

The only danger resulting from this is that in the course of time any person in his position is apt to become so familiar with the needs of the industry as such, and so involved in attempting to regulate it, that the special interests of the public may at times be overlooked. If this is the case, it might be advisable to appoint a consumer representative who would ideally be a person capable of reading and understanding not only company's statements but studies of producer's costs. It was said that a four-man Board would be unwieldy. I do not know, however, if in practice this would necessarily be so, and such a Board might find considerable public approval, and it is very hard to argue strenuously against it.

In concluding my observations on the administration of the Milk Control Board under the Milk Control Act I do not wish at this stage to make any recommendations, as these will depend to a considerable degree on the recommendations arrived at after study has been made of the position of the producers and distributors respectively. I propose, therefore, to make recommendations in respect to the Milk Control Board as part of the general conclusions and recommendations at the end of the report.

I would not like to conclude the review of the administration of the Milk Control Board, however, without paying tribute to the patience and courtesy of Mr. C. M. Meek, the present Chairman of the Board. No one has been more obliging and helpful to the Commission under what at times must have been trying circumstances, than has Mr. Meek. He has loyally endeavoured to supply all the information asked, and has been most co-operative throughout the enquiry.

It was impossible not to be impressed by his conscientious regard for his duties and his desire to do what he deemed best in the somewhat difficult task for which he is responsible. I would like to express my thanks of those associated with me for the helpful assistance he has given me.

CHAPTER IV

Legislation Peculiarly Applicable to the Dairy Industry in Ontario

Apart from The Milk Control Act (R.S.O. 1937, Chap. 76), there are three Dominion Statutes, three Dominion Orders-in-Council, nine Provincial Statutes, a plethora of municipal by-laws, and extensive regulations appurtenant to most of the statutes all directly applicable to the dairy industry in the Province of Ontario, in one way or another. The Commission was fortunate in having the evidence of James C. Hay, Esq., Solicitor for the Department of Agriculture, Ontario, to assist it in considering this mass of legislation. Mr. Hay also prepared a brief containing the various acts, regulations and sample municipal by-laws which has been invaluable in reducing the legislation to a form in which it can be readily considered.

Dominion Legislation:

(a) *The Dairy Industry Act*, R.S.C. 1927 (Chap. 45) and Regulations made thereunder.

This Act is designed to impose a uniform dominion-wide standard of manufacturing, inspection, grading, marking and packaging for sale of dairy products, but most particularly butter and cheese.

All cheese factories and creameries are required to register with the Dairy Products Division of the Dominion Department of Agriculture and cheese and butter produced by such plants is inspected and graded by officials appointed under the Act and Regulations.

The chief purpose of the Act is to control grades, marking and packaging of butter and cheese. In addition the Act prohibits the manufacture, importing or selling of oleomargarine or any other butter substitute.

(b) *The Cheese and Cheese Factory Improvement Act*, Statutes of Canada (1939) Chap. 12 and Regulations made thereunder.

There are two objects of this Act, first, to encourage the reduction in the total number of cheese factories, by authorizing grants up to 50% of the cost of constructing any cheese factory of proper design, etc., which is being built to replace two or more factories, and secondly to encourage the highest quality of Cheddar cheese by paying a premium out of consolidated revenue of one cent to two cents per pound for highest grades.

(c) *The Food and Drugs Act* (R.S.C. 1927, Chap. 76)

The regulations passed under this Act contain definitions, applicable throughout the Dominion of milk products processed for human consumption, and hence set uniform minimum standards for such products.

(d) *Orders-in-Council.*

The various Dominion Orders-in-Council were the product of wartime emergency and provided for the payment of certain subsidies and the elemination of trade practices that tended to be wasteful of commodities in extremely short supply.

Province of Ontario Legislation

In addition to The Milk Control Act, which is dealt with in detail elsewhere in this report, Provincial Legislation in this Province has been enacted under four main heads. These, with the relevant legislation, are as follows:

I. *CHEESE MANUFACTURE*

(a) *The Cheese and Hog Subsidy Act, Statutes of Ontario* (1941) Chap. 11.

This Act authorizes the payment of a two cent per pound Provincial Producer subsidy for cheese. The Act is for one year's duration, but has been renewed annually to date, and is supplementary to the Dominion Cheese and Cheese Factory Improvement Act.

(b) *The Consolidated Cheese Factories Act*, R.S.O. 1937, Chap. 87.

This Act, like its Dominion counterpart, provides for generous loans for the construction of cheese factories to replace two or more old ones and having a very substantial output. It is designed to assist in the reduction of processing costs in the manufacture of Cheddar cheese by stimulating mass production to assist the producers in getting an adequate return for their milk.

II. *PUBLIC HEALTH*

(a) *The Public Health Act, R.S.O.* (1937). Chap. 229.

This Act applies particularly to fluid milk insofar as it deals with compulsory pasteurization, and the minimum sanitary requirements for pasteurizing plants. Compulsory pasteurization is in force in most areas in Ontario and the regulations dealing with plants are very elaborate.

The Act also makes general provision for the condemning of food unfit for human consumption and provides penalties for its distribution, sale or possession.

(b) *The Milk and Cream Act*, R.S.O. 1937. Chap. 302.

This Act authorizes all municipalities except counties to pass by-laws to control the quality of milk and cream offered for sale within its boundaries and for the licensing of vendors of such products. The Act provides that municipalities may regulate the minimum butter-fat and solid content of milk and cream but prohibits the sale of cream of less than 16 per cent butter-fat and milk of less than 3.25 per cent butter-fat. This latter provision is inconsistent with the views of nutritional experts—see particularly the evidence of Dr. Tisdall and Dr. Pett, Appendix 2—and should receive careful consideration with a view to revision.

(c) *The Dairy Products Act* 1938, St. of Ont. 1938, Chap. 7.

This Act and its regulations control the construction and operation of cheese-factories, creameries, condenseries, milk concentrating and milk separating plants. It provides for the licensing of such plants, and the examining and licensing of cheese-makers, butter-makers, etc.

The whole Act is under the direction of a Director of Dairying and is specifically designed to ensure a very high standard of dairy product in the Province of Ontario.

III. *TRANSPORTATION*

The Commercial Vehicle Act, R.S.O. 1937, Chap. 290.

This Act and its regulations govern the transportation for hire of persons and goods, in the Province of Ontario, including raw milk from producer to processor. A farmer or group of farmers jointly, owning a truck, do not need a P.C.V. license to haul their own product, but if a farmer hauls for his neighbour or neighbours, he comes under the Act.

An applicant for a license to haul milk for hire must appear before the Municipal Board, prepared to show that the service he offers is necessary in the community. The Producers' Association, Milk Control Board, and any local Transport Associations are given an opportunity to appear also and approve or oppose the application. If the applicant can establish public necessity and convenience, he will probably receive his license.

In this connection it is to be noted that in the markets of Toronto, Hamilton and Guelph there are very strong Milk Transport Associations who have entered into agreements for routes and rates with Producer and Distributor Associations and under the eyes of the Milk Control Board with a view to bringing some measure of control by the industry itself with respect to transportation in these areas.

IV. *MARKETING*

(a) *The Farm Products Grades and Sales Act, R.S.O.* (1937), Chap. 307.

This Provincial Statute is to some extent a duplication of the Dominion Dairy Industry Act in that it sets up standards for cheese and butter and makes specific provision for grading, marking, inspection and enforcement by Provincial personnel. It does not conflict with the Dominion Act, in that the grades are the same and arrived at in the same way. The Act is of wider application than the Dominion legislation, in that it may be extended by regulation to include every type of farm product. At present the Regulations only extend to Dairy Products.

(b) *The Co-Operative Marketing Loan Act*, R.S.O. 1937, Chap. 85.

This Act is designed to provide financial assistance to groups of producers in erecting facilities for grading, packing, storing, cleaning, drying, processing and marketing of farm products. For purposes other than cold-storage plants, the maximum sum that may be loaned is $15,000, but for cold storage plants the amount shall be up to 50% of the value of the property and plant up to a maximum loan of $65,000.00. This is in essence another act to assist the primary producer to secure the maximum share of the ultimate consumer's dollar, and of course is applicable in its terms to virtually every phase of the dairy industry.

(c) *The Farm Products Marketing Act*, 1946, St. of Ont. Chap. 29.

This Act replaced the Farm Products Control Act of 1938 and is designed to provide a legal means for farmers to set, under the authority of Provincial Law, prices for farm products. Each product, brought under the Act by the adoption of a scheme, is, thenceforth, a regulated product, and strong powers are provided to maintain any price structure adopted.

The mechanics of the Act involve first of all an association of producers, then a scheme providing for the creation of a local marketing board, and finally the vesting of appropriate powers in such board. The whole scheme as propounded must be approved by the Minister of Agriculture and duly promulgated.

At the present time ten such schemes have been approved, namely,

I. The Ontario Cheese Producers' Marketing Scheme.
II. The Ontario Seed Corn Growers' Marketing Scheme.
III. The Ontario Asparagus Growers' Marketing-for-Processing Scheme.
IV. The Ontario Bean Growers' Marketing Scheme.
V. The Ontario Berry Growers' Marketing Scheme.
VI. The Ontario Pear, Plum and Cherry Growers' Marketing-for-Processing Scheme.
VII. The Ontario Vegetable Growers' Marketing-for-Processing Scheme.
VIII. The Ontario Peach Growers' Marketing - for - Processing Scheme.
IX. The Ontario Sugar Beet Growers' Marketing-for-Processing Scheme.
X. The Ontario Hog Producers' Marketing Scheme.

There are others in the process of drafting and consideration, but an examination of those approved, leads immediately to the observation that the product regulated,—in all cases—is capable of a certain time of storage pending marketing. It would appear that products which are susceptible to regulation by this Act must have this quality in order to give local boards a little time to negotiate sales and to permit handling.

This essential characteristic, while shared by many dairy products after processing, is peculiarly not a characteristic of fluid milk in its raw state. Similarly, the markets for fluid milk in the raw state overlap each other to a very great degree, particularly in south-central and south-western Ontario, —with the result that no local board could be appointed that could reasonably deal with this particular product in any locality. As an illustration of the problem to be faced, some milk, destined for the fluid milk trade in Toronto, comes from the shores of Lake Huron every day,—and every county in between has its quota of shippers to the Toronto Milk Shed.

There has been some suggestion that this particular Act might usefully be employed in the marketing of raw milk, and therefore the matter has been discussed at some length, to bring out the important points which in my view render it inapplicable to this particular product.

Municipal Legislation

Under the Milk and Cream Act, R.S.O. 1937, Chap. 302, authorized municipalities have passed regulatory by-laws dealing with the marketing of these products within the municipality. A typical by-law is that of the City of Brantford, which appears as Appendix 9.

ORGANIZATION OF THE DAIRY INDUSTRY IN ONTARIO

As will be seen from the more detailed discussion of the associations which have been formed by various groups of persons engaged in the dairy industry in Ontario, the whole industry has in comparatively recent times become strongly organized in representative associations. There is no doubt that these associations have contributed much to the progress and development of the industry, and there is every reason to expect that in the future they will continue to exercise their influence for the good, primarily of their own members, but indirectly and as a consequence for the benefit of the public at large.

The associations referred to may be listed as follows:

Producers:

(a) The Ontario Whole Milk Producers' League, representing 16,000 producers of whole milk.
(b) The Ontario Concentrated Milk Producers' Association, representing 12.000 producers of milk for condensary purposes.
(c) The Ontario Cheese Producers' Association, representing 25.000 producers of milk for manufacture into Cheddar cheese.
(d) The Ontario Cream Producers' Association, representing upwards of 76,000 producers of cream for manufacture into butter.

Distributors and Manufacturers:

(a) The Ontario Whole Milk Distributors' Association, representing 400 processors and distributors of fluid milk, comprising over 75% of the total business in the Province.
(b) The Ontario Creamery Association, representing 221 out of 279 manufacturers of creamery butter in Ontario, and producing 88% of the creamery butter made in the Province.

A more detailed discussion of the organization and operation of these associations is set out in the chapters relating to producers and distributors respectively, but for ready reference it was thought desirable to list all the associations at this point.

CHAPTER V

Production and the Position of the Producer

The position of the producers as to the prices paid them for fluid milk was placed entirely on the ground of cost in the evidence before me. It was not until the concluding sessions of the enquiry that they apparently took into consideration the question of consumer demand particularly as it was conditioned by the price charged to the consuming public. What the producer can get for his milk in the fluid market is, of course, very directly governed by the consumer demand and by the prices the consumers are willing to pay for the product. In determining what a fair price to the consumer is, therefore, the producer should never lose sight of these hard facts and irrespective of his cost what he can get for his milk must inevitably be influenced in part by the other factors I have mentioned.

At the same time the producers as a class should not lose sight of the fact that these other conditions may from time to time be altered not only by the general level of income of the consuming public but by education and propaganda among the consuming public as to the advisability of giving milk a larger place in its diet. They should also never lose sight of the fact that after all the basic condition of large quantity consumption of milk is low price.

Until the producers as a class put themselves in the position where they can effectively make the consuming public understand the full implications of their position, there is little real hope of convincing the public of the necessity of paying a retail price for milk corresponding with their reasonable costs of production. Efforts along these lines have been made through the establishing of Milk Foundations which have accomplished considerable in this direction. It would appear that much more must be done, and that the nature of the operation carried on by the dairy farmer and the conditions under which he works should be made more plain to the consuming public.

The Organization of the Producers' Part of the Dairy Industry in Ontario

Development, control and regulation of the dairy industry in Ontario insofar as the application of the Milk Control Act is concerned, has been very considerably facilitated by the existence of strong and representative associations of some of the major groups involved in milk production.

The Ontario Whole Milk Producers' League is an incorporated body having approximately 16,000 producers of whole milk in the Province of Ontario in its membership. In area it is province-wide and all but a negligible number of the farms producing fluid milk for consumption in the Province of Ontario are members of this league.

The league functions mainly through seventy-three local associations which are to a degree independent organizations operating under the general supervision of the parent body. The authority of these locals is particularly important with respect to the negotiating of prices, the establishment of quotas and the provision of outlets for the product of the individual members.

The Ontario Concentrated Milk Producers' Association is also incorporated under the Agricultural Societies Act and has a membership of approximately

12,000 producers concentrated mainly in the southwestern and southeastern parts of the province. There are between one and two thousand producers of milk for concentration who are not members of the association but who no doubt share in any benefits which the association may bring about. The members of this association produce fluid milk for delivery to condensaries where milk is processed into various commodities.

Like the Ontario Whole Milk Producers' League, this association operates to a large degree through twenty-nine local associations who enjoy a substantial measure of independence with respect to the negotiating of contracts and securing of outlets for the product of their members. There may be some overlapping in membership between the league and this association in that some members of the league may ship to condensaries surplus milk during flush seasons.

The Ontario Cheese Producers' Association represents approximately 25,000 producers of milk in the Province of Ontario whose milk is delivered to cheese factories and manufactured into Cheddar cheese. Very few producers of milk for this purpose are not members of the association. The Provincial Association is divided into five areas which are represented on a provincial board of directors and each area in turn has a county association for each county in the area.

Ninety-five per cent of all cheese factories in Ontario are either owned by producers supplying milk to be processed or are owned and operated by a qualified cheese maker. There are upwards of 570 cheese factories in these two categories, and the remaining 30 to 40 cheese factories are owned by large companies such as the Kraft Company which manufactures in the main processed cheese as opposed to the Ontario Cheddar cheese.

This association is very largely concerned with the marketing of the finished product, under the Dominion Dairy Industry Act and the Ontario Farm Products Marketing Act. So important is this part of the association's work that it caused a company known as the Ontario Cheese Producers Limited to be incorporated for the express purpose of acting as a marketing agency.

The Ontario Cream Producers' Association is an unincorporated association which was only initially organized in October, 1946. While very new, it claims to be representative of upwards of 76,000 producers of cream for the manufacture of butter in the Province of Ontario. One of the chief objects of this association is the formulation and approval of a marketing scheme under the Farm Products Marketing Act.

While not directly a part of production, the transporting of fluid milk is of great importance to the position of the producers. There is no provincial-wide association of persons engaged in the transporting of fluid milk from producer to distributor, but there are three substantial local transport associations, namely Toronto, Hamilton and Guelph, who have been sufficiently successful in organizing to negotiate contracts which have resulted in a substantial measure of control over the haulage of milk into these markets, and so much so that the Milk Control Board and the Department of Highways and the Municipal Board are able to deal with these local associations as thoroughly representative of the market.

The Ontario Creamery Association, organized in 1917, is an unincorporated trade association representing 221 of the 279 creameries in Ontario. The members of the association produced, in 1945, 88 per cent of the creamery butter made in the Province of Ontario. This association, therefore, is clearly qualified to speak for the industry, and it has, on occasion, made appropriate representations, with respect to prices and marketing, and its very existence is of great value in the enforcement of legislation with respect to manufacture and grading.

The Producers

As appears elsewhere, the producers of whole milk are by and large chiefly members of an association known as the Ontario Whole Milk Producers' League. All producers of fluid milk are not necessarily members of this trade association, but it can be fairly said that the greater number of them are, and it is thoroughly representative of the producer and of the industry.

The purposes and objects of the league are numerous, but there are three expressed in its charter which it has pursued rather vigorously. These are:

"(a) To improve and maintain the standard of milk, cream, and all dairy products.
(b) To co-operate with any other organization or organizations.
(c) To co-operate with any person, firm, corporation or governmental body in the preparation and carrying out of regulations for the purposes aforesaid."

It has acted generally for its members in connection with hearings before the Milk Control Board and submissions to the Wartime Prices and Trade Board.

In membership it is divided into local associations of which a list is set out in Appendix 10, and it was stated to me that each local was entitled to nominate directors to serve on the board of the league. If the membership of a local association is two hundred or less, one director is nominated. If it is larger than that the local nominates one director for the first two hundred and one director for each additional five hundred members or part thereof.

The annual meetings are composed of delegates nominated by the local association and the actual direction of the league is conducted by eleven members appointed by the delegates in attendance at the annual meeting.

The local associations are semi-independent organizations functioning on their own responsibility as to local problems. The general or provincial association is merely a co-operative association of the various locals and is concerned with matters of interest to the members as a whole.

It was said that the league has been recognized by the Dominion and Provincial Governments and the Milk Control Board, and is fully representative of producers in the fluid milk field. I think it can be fairly said that the producers of fluid milk are looked on as being among the most progressive, well organized and prosperous elements in the farming community of Ontario. Their lot, however, is not entirely a happy one and they have many problems and troubles affecting the operation of their business as well as being under the necessity of a constant and unremitting attention to their dairy herds. As one of the witnesses appearing before me at London said, the secret of successful dairy farming is herd management, and this unquestionably calls for constant and continuous care and attention.

Mr. Douglas Hart, who is looked upon as one of the most successful dairy farmers and breeders of dairy cattle in the province, and who carries on a very large and successful operation in Oxford County, stated in evidence that despite a large number of employees he found it necessary himself to work anywhere from sixteen to eighteen hours a day. As he put it, it was not that the work was so hard but that it was long and that constant attention to it was necessary if success was to be assured.

Many producers find that they must not only work themselves but must call on their wives and children to do a substantial part of the work in connection with the production of fluid milk. A brief on the trials of a dairy farmer's wife, which at first blush may seem somewhat of an exaggeration, was presented by a representative of the Women's Institute in Carleton County in the Ottawa Valley. A sober consideration of the evidence as I have heard it convinced me that this statement does not exaggerate the true state of affairs and I am accordingly setting it forth in Appendix 11. I am convinced from the evidence that there are countless farm wives in Ontario who would find it a very truthful statement of the conditions under which they have to carry on.

The principal problem of the producer has been in essence a financial one, that is, to obtain a fair return for his product. In its result, however, it is not so limited but has many general social aspects which must call for consideration if a reasonable standard of life is to be preserved among the milk producers of the province.

It would appear to me, to put the matter shortly, that the farmer producing fluid milk for consumption in towns and cities of the province is as much entitled to a fair return for his work as a consumer who works in a factory or an office. If up to the present time, through lack of sufficiently effective organization, he has not been able to make his demands felt, that is not a reason for asking him to produce milk for the fluid market at prices less than his cost plus a reasonable profit. He is primarily entitled to the costs of producing milk and to a fair profit on that labour.

This is a point of view that must be seriously considered and maintained if the farming population of this province are to have a fair share of the general income produced and if adequate supplies of milk are to be available for consumption by urban populations. In saying this I quite recognize the fact that there is an obligation on the producer to take steps to learn how to produce milk as cheaply as possible, if he has to have the benefit of governmental protection and intervention on his behalf. He must recognize that he is under an obligation to produce high quality milk as cheaply as he can, and it cannot always be said that this obligation has been fully recognized.

There is also the other consideration previously mentioned that no matter what the cost of production, there is a maximum price above which milk consumption will diminish and if this fact is fully recognized by the producers it might operate to produce more efficient production methods and better herd management in the long run. It is unquestionably true that low cost milk means high consumption, and low cost milk is the goal to which the producer should be constantly bending his efforts.

Milk production, of course, is not confined to production for the fluid milk market. As has been stated earlier in this report, milk is also produced on the farms of Ontario for cheese factories, condensaries, and by far the greater number of farmers in Ontario selling milk products sell cream to creameries for the production of butter.

The problems affecting the production of milk for condensaries, creameries and cheese factories will be considered separately. In this chapter I am limiting the discussion to the position of those producing milk for the fluid milk market for consumption by the urban populations of the province. The word urban, of course, includes villages as well as the towns and cities.

Insofar as the fluid milk producers as a group are concerned, their degree of specialization varies very widely. At one end of the scale you have a farmer who produces for the fluid milk market with a purebred herd and who also engages in what is probably more profitable, that is the production of animals for breeding purposes. At the the other end of the scale you have the farmer who probably carries on several farm enterprises, and who may produce as little as one can of milk per day for the fluid market. There is the greatest possible range and variation between the producers as such.

As in other aspects of the dairy business, it is unquestionably true that where there is a variety of enterprises, either the raising of breeding stock or some other line of farming, there is greater certainty of the average farmer showing a larger net income from his effort.

As was said by the distributors, however, when this matter was discussed with them, if a business is to be successful every branch of it should stand on its own feet and show some profit, even if a small one. It cannot be said that the producer's business is in a sound position if he cannot show a reasonable profit on the production of fluid milk as such.

Factors Affecting the Cost of Production

As apears from the chapter dealing with the administration of the Milk Control Board, sporadic attempts have been made from time to time to ascertain the cost of producing milk for the fluid market, and for the other markets into which it flows. The Board itself has never undertaken, as far as I can ascertain, any very substantial inquiry, but in the late 1930's a joint survey was undertaken by the Economics Department of the Ontario Agricultural College at Guelph, and the Economics Division of the Dominion Departure of Agriculture. The study was under the general supervision of Mr. H. R. Hare of the Dominion Department of Agriculture, and started off with the co-operation of some 780 farmers who kept records of their business for the twelve months ending June 30, 1937. It carried on from 1936-37 and included the year 1939-40. It was not carried on during the war.

The various methods of determining costs of producing fluid milk will be discussed later in this chapter but the study made under Mr. Hare's immediate supervision is the only serious attempt which has been made in Ontario, at least in recent times. Whether his calculations are now valid some eight years after the last cost records were taken is a question which will be discussed below, but the various factors which affect the cost of producing fluid milk which he set out still strike me as having considerable validity. They may be briefly listed as follows: size and fertility of farm, size of milking herd, milk sales per cow, cost of labour and efficiency thereof, crop yields, feed costs, hauling costs, to mention the most obvious items.

It will readily be seen on any reflection at all that there is a possibility of the greatest variation in these factors as between farm and farm, but despite this there are certain general considerations which may throw some light on the condition of the farmer producing milk for the fluid milk market. For one thing, it is unquestionably true that the amount of capital invested by a farmer producing fluid milk is more substantial than that of a farmer engaging in general farming.

In the case of fluid milk producers, the first part of the capital investment is represented by the cost of cattle themselves. Over the last six years this has increased substantially. Part of this increase is unquestionably due to the inflationary conditions existing in the United States where a ready market for good milk cows has existed. As was stated before me, dairy cattle exports from Ontario to the United States have greatly increased. In June, 1946, the number of dairy cattle shipped from this province to the United States amounted to 4,445 head as compared with 374 in June of 1939. During the whole of 1945 exports amounted to 26,242 head exported as against 6,537 head in 1939. This increased exportation has increased the prices which farmers must pay if they are to obtain good milk cows by way of purchase. It would also indicate, I think, that selling good milk cows has in many cases been more profitable than keeping them for the production of fluid milk at the prices prevailing for that commodity.

The total figures of exports of dairy cattle from Ontario to the United States for the years 1939 to 1946 are as follows:

1939— 6,537
1940— 8,679
1941—14,205
1942—14,381
1943—19,094
1944—19,845
1945—26,242
1946—38,292

(These figures do not include cattle from Eastern Ontario moving through Quebec ports.)

The evidence before me led me to believe that, on the average, prices had doubled or even more than doubled during the period under discussion.

It was also quite apparent from the evidence before me that a dairy farmer, once he commits himself to this type of farming, is committed to it for a number of years, and that, since a good milk producing herd cannot be built up in a short time, it is not possible for a dairy farmer to shift readily to other kinds of farming.

A perusal of the sanitary regulations which farmers producing milk for the fluid milk market have to comply with and which are indicated in this report indicate a considerable amount of additional equipment of an expensive type which the dairy farmer must possess. He unquestionably has to have more expensive buildings, stables and milk houses than the farmer who is engaged in general farming. He thus has a much more substantial amount of fixed capital tied up in his business than farmers pursuing different types of farming enterprise. It is true that all farming is essentially a business involving definite risks such as the vagaries of the weather, pests and blight and many other uncontrollable factors. In addition to these, however, the dairy farmer is under the additional risk of losses from the special dairy cattle diseases which may be, and often are, very serious. It would appear that the more nearly dairy cows are made to produce to full capacity the greater is the likelihood of one or other of the diseases developing among them.

In the brief presented to me by the Hamilton Milk Producers' Association, which was one of the most thoroughly prepared briefs I received, the following statement was made:

> "Heavy losses are incurred by dairy farmers due to animal diseases. These losses comprise a substantial part of the cost of milk production, and must be met by the price received by producers for whole milk. Dr. A. L. MacNabb, Principal of the Ontario Veterinary College, an authority on this subject, has conducted investigational studies on Government herds to determine the incidence of disease. He estimates the loss to dairy herds from mastitis infection in Ontario at from ten to fifteen million dollars and from contagious abortion at twenty million dollars annually. He states these figures are built on the assumption that there is a five per cent herd loss annually, and a milk production loss ranging from ten to fifty per cent. In abortion disease the loss of the calf crop reduces production and efficient breeding. The average production life in years of Ontario dairy cows is six to seven years."

In connection with the average production life in years of a dairy cow in

Ontario, the general evidence heard by me would make me place it at somewhere less than six or seven years as mentioned above. On the evidence I heard I would be of the opinion that the effective production life in years of an average dairy cow, under present day conditions, is closer to four or five years than to six or seven.

The fluid milk producer is under another obligation which does not affect farmers producing milk for other markets, and that is the necessity of maintaining a steady flow of fluid milk. Under natural conditions cows freshen in the spring and the largest supply of milk is generally available in the spring and summer months. The fluid milk producer must, however, so arrange his breeding that he has his cows freshening in all periods of the year and it is not possible to do this without adding greatly to his expenses of production.

It may be interesting to note the amount of milk produced from year to year for the fluid milk market in Ontario. Over the last six or seven years there has been a most impressive increase in volume. From the evidence it would appear that this increase has largely resulted from bringing in new producers rather than from increasing the amount supplied by each producer. In this connection the following table may be of some interest:

TOTAL MILK PRODUCED IN ONTARIO FOR FLUID CONSUMPTION IN LBS.

	1939	1941	1944	1946
JANUARY				
Fluid Sales	......	100,598,000	131,407,000	144,120,000
Farm Home Consumed	......	41,431,000	36,120,000	41,668,000
MAY				
Fluid Sales	......	102,924,000	129,576,000	150,081,000
Farm-Home Consumed	......	43,730,000	44,266,000	43,385,000
JUNE				
Fluid Sales	......	100,965,000	128,299,000	144,548,000
Farm-Home Consumed	......	41,284,000	41,155,000	39,904,000
OCTOBER				
Fluid Sales	......	105,371,000	126,592,000	126,137,000
Farm-Home Consumed	......	40,453,000	41,402,000	43,710,000
Total for year—Fluid Sales.	1,179,675,000	1,223,824,000	1,511,678,000	1,664,338,000
Farm-Home Consumed	492,129,000	489,149,000	498,760,000	506,374,000
Grand Total	1,671,804,000	1,712,973,000	2,010,438,000	2,170,712,000

Figures supplied by D.B.S.

Monthly figures for 1939, not available.

It is interesting to compare these figures with the amount of milk produced for butter, cheese and concentrated milk in the same period. Tables covering milk consumed for these purposes and the amount of finished products recovered are as follows: (in pounds)

	1939	1941	1944	1946
Butter				
As Product	102,832,000	100,843,000	82,799,000	76,711,000
As Milk	2,407,304,000	2,360,731,000	1,938,325,000	1,797,339,000
Cheese				
As Product	90,130,000	104,174,000	107,684,000	96,106,000
As Milk	1,009,456,000	1,160,436,000	1,206,062,000	1,070,621,000
Concentrated Whole Milk				
As Product	100,776,000	119,111,000	126,380,000	128,734,000
As Milk	264,673,000	312,901,000	365,972,000	373,513,000

It may also be of interest to consider in conjunction with this the total number of milk cows in Ontario in the years under review. They are as follows:

1939	1941	1944	1946
1,182,878	1,142,008	1,187,618	1.257,800

A consideration of these two tables discloses not so much an increase in over-all milk production as a pronounced shift from one product to another of the milk produced. Of particular significance is the fact that a steadily increasing percentage of the total has been consumed as fluid milk. It is also significant that the total amount of milk produced for all purposes over the period is relatively much greater than the increase in the number of cows. This clearly indicates a pronounced increase in productive efficiency on the part of the farmers.

One cannot peruse the various reports made on the milk industry in Great Britain without being struck by the similarity between conditions found there and those in Ontario. I was constantly told by witnesses who should be in a position to know, that conditions were so dissimilar to ours in Great Britain that their experience was not a safe guide. Despite this, consideration of the various reports of committees there establishes a very profound similarity of essential conditions insofar as producers are concerned.

You are there, of course, dealing particularly since the start of the war with a condition where there is a scarcity of fluid milk in relation to the demand for it existing. That is admittedly not the case in Ontario today. Nevertheless, it is obvious that, insofar as fundamentals are concerned, the problem of the dairy farmer in Great Britain has not been tremendously different from that of dairy farmers in Ontario. A very useful guide to some of the paths along which the producers might develop their section of the industry can be obtained from a perusal of the various reports prepared by commissions and committees under the Ministry of Agriculture in Great Britain during the last ten or twelve years.

So far in this report I have approached the problem of the producer from the viewpoint of cost. Cost, however, must be only one of the factors which enter into the price which may be obtained by the producer for fluid milk. There is no greater fallacy in industry generally than the naive belief that price must always be made high enough to cover cost plus a fair profit. Prices are not and cannot be arrived at in that manner. In the eventual result they are the outcome of an interaction between supply and consumer demand for the product in question.

The producer must, of course, try to obtain his cost of production plus a fair profit. But if he is to obtain this he must continually strive to reduce his cost. The experience in fluid milk sales since October, while undoubtedly affected by general increases in the cost of living, would also indicate that.

There appears to be a price limit insofar as the consuming public is concerned beyond which it will reduce its demand for fluid milk. It may be argued that this is unfair, that incomes on the part of the urban population have increased out of all proportions to those of the agricultural part of the population, but it is a fact which nevertheless exists and until the producers can convince the consuming public that they should pay a higher price for milk there will be the greatest resistance to such a condition of affairs, and the resistance will show in decreased consumption.

The following table shows the amount of fluid milk consumed in Ontario in the period from January, 1946, to the end of June, 1947, expressed in quarts:

1946		1947	
January:	38,788,000	January:	36,874,000
February:	36,386,000	February:	34,578,800
March:	40,645,000	March:	37,743,600
April:	39,637,000	April:	36,551,300
May:	41,328,000	May:	37,874,800
June:	39,106,000	June:	36,152,300
July:	41,268,000		
August:	40,168,000		
September:	38,539,000		
October:	37,824,000		
November:	37,092,000		
December:	36,953,000		

Also set out in Appendix 12 is a study furnished me by the Hamilton Milk Producers' Association which I accept as valid and which shows the increases in income of urban consumers in the vicinity of Hamilton and also in Ontario since 1939. The purpose of this study was, of course, to show that urban consumers could afford to pay more for milk. Unless they show a greater willingness to do so than they have in the past, that argument is rather academic, but it is of assistance in assessing the general position.

Roughly speaking, there was a most impressive increase in the consumption of fluid milk in Ontario during the war years from 1941 on. With the price increases in the spring and fall of 1946, that increase was reversed, and since then there has been a gradual decline. It is quite true that this is probably due to the large increase in the general cost of living which has taken place in that time and milk is only one of several necessary foods all of which have increased in price to the consumer. Nevertheless, the fact that this decrease has occurred must indicate very clearly to producers that there is a limit at the present time, whatever the future may hold, beyond which they cannot hope to sell milk in the volume they have previously sold it.

The following table, which shows the total wholesale and retail commercial sales of fluid milk in Ontario, expressed in quarts, since 1941, may be of interest:

1941	1942	1943	1944	1945	1946
290,089,400	324,948,700	386,734,500	411,963,000	432,857,000	467,736,000

MILK PRODUCTION COSTS, THEIR CALCULATION AND USE

During this enquiry a great deal of consideration has been given to the cost of producing milk on the farm and matters relating thereto.

There are two main reasons for this. Since one of the chief matters requiring determination has been the degree of adequacy of the prices received by producers for their milk, it has been necessary to find some measuring rod which would enable me to suggest what prices might be considered necessary and desirable. In searching for such a measure it has seemed to me that the best and, indeed, the only practicable way of deciding whether a price was satisfactory or not was to try and discover whether it was sufficient to cover the costs of production. In saying this I am not suggesting that prices should always be high enough to cover all costs at all times. Under the dynamic conditions which actually prevail and which result in fairly constant changes in both supply and demand, it is obvious that prices may be higher or lower than costs at any specific point of time.

It seems equally obvious, however, that, over any considerable period of time or in the long run, prices must be at least sufficient to cover all costs of reasonably efficient producers. Such a cost-price relationship seems necessary if sufficient milk of desirable quality is to be forthcoming, if the dairy farm production plant is to be maintained satisfactorily, if dairy farmers and their families are to enjoy the material standard of living to which they are entitled, and if a proper economic balance between dairy farmers and other classes in the population is to be secured and maintained.

These statements will probably suffice to explain why every possible attempt has been made to obtain reliable cost information and to relate it to producer prices.

The second reason for studying the producer cost situation is not unrelated to the first one. It is in the public interest that consumers of milk products should receive these products at the lowest possible price consistent with the giving of reasonable remuneration to those who supply them. It is clear that the possibilities of giving consumers cheaper milk as time goes on must depend upon the possibilities of reducing costs of production on the farms as well as the costs of processing and distribution after leaving the farms. In view of this fact considerable attention has been given to the matter of production cost trends and, in particular, to policies and programs that might be expected to produce cost-reducing effects in future.

Because of the extremely widespread tendency to advocate the use of cost data as a basis for price fixing, as indicated earlier, by far the greater part of the evidence submitted to me by individual producers and producer organizations related to costs and the cost-price relationships. Because of the current consumer interest in producer costs as related to producer prices, it seems desirable to say something about the problems encountered in connection with the calculation and use of cost information and also something about the possibilities of effecting further cost reduction.

Methods of Determining Costs

To begin with it is necessary to note that there are several fairly distinct methods of general procedure that may be used when attempting to secure the actual cost information. Since the start of the century four main methods have been developed and employed in both Canada and the United States as well as elsewhere. The Estimation Method uses data already gathered by some one else as the basis for the desired cost figures. The sources of data may include cost studies previously made and federal or provincial publications containing information on farm expenses and income. Ordinarily this method is used when only a rough estimate of costs is required. It has sometimes been employed, however, because the figures were needed immediately and when, therefore, there was insufficient time to conduct a careful and accurate study. Its use has tended to decline as the desire for increasing accuracy has made necessary the employment of more thorough-going methods.

The Survey Method involves the personal visiting of farmers by an enumerator who secures answers to a prepared list of questions. The farmer is asked to give his estimate of each of the various cost items of the dairy enterprise and usually, also, his estimates, or actual records if he has such, concerning his entire farm business. The data secured relate to the year preceding the making of the survey. Except in the case of the relatively small percentage of farmers who keep regular and detailed farm business records, the use of the Survey Method makes it necessary to rely on the farmer's memory concerning events covering a twelve-month period. This necessity of depending on the memory rather than the actual record of what transpired is unquestionably the big weakness of the survey method. While it has commonly been assumed that errors of memory in one direction will be offset by other errors in the opposite direction, it has often been found that, in connection with certain kinds of questions at least, the majority of errors tend to run in the same direction. In defense of the Survey Method. however, it should be said that any margin of error in the answers given is bound to become less pronounced as the percentage of farmers keeping regular records of their business steadily increases. As that development occurs the answers become transformed from estimates to records of actual fact. Speaking generally the special advantages of the Survey Method are that it gives results that are much more reliable than those obtained from using the Estimation Method, that it permits information to be obtained from a much greater number and variety of farms with a given expenditure of funds than is possible when using more detailed accounting methods, and that it makes possible the collection of data in a relatively short time.

A method sometimes known as the Farmer's Record Plan differs from the Survey Method in that it involves an arrangement whereby a representative group of farmers agree to keep more or less complete records of costs. When this plan is followed the number of farmers keeping records is usually fairly large and the amount of assistance which farmers receive from field supervisors is relatively limited. The main advantage of the method is that data can be obtained from actual records, which avoids the necessity of depending upon the estimates or memory of the farmer. The main disadvantage is that records have to be kept for at least one full production season before the data can be collected and analyzed.

The Detailed Accounting or Route Method is somewhat similar to the Farmer's Record Plan, but is considerably more elaborate and detailed in character. Detailed accounts are kept, usually by the farmer himself but under close or direct supervision of a field man or route man who makes regular visits to take inventories, check up on entries, etc. In order to be able to allocate expenses to an individual product such as milk it is necessary to find out how many hours of labor were spent on the dairy enterprise, how much of each kind of feed was consumed by the dairy herd, how much manure was obtained, etc. This involves the use of an elaborate set of labor, feed and other records. The strong argument in favor of this method is that it yields the most accurate and dependable data that can possibly be obtained. One of its main weaknesses lies in the high expense involved. Experience indicates that 25 farms are about as many as a route man can handle. This matter of large expense per farm is likely to mean that the number of farms from which data can be obtained is not sufficiently large to provide a representative sample. Furthermore the high degree of farmer co-operation which this method requires makes it almost certain that the data will be secured from farmers that are much above the average in efficiency.

In addition to the methods just mentioned, all of which are well established, reference may be made to a plan followed in many areas in recent years and which is based on the use of a formula. The formula is derived from information disclosed by an actual study of costs previously undertaken in accordance with one of the methods already referred to and indicates the physical quantities of the various kinds of feed and also the amount of labor required to produce 100 pounds of milk. The basic assumption is that these quantities tend to remain fairly constant from year to year. To the extent that they do remain constant it is possible to calculate the cost of producing milk at any particular time as well as to measure the changes in costs as between periods by simply multiplying the various quantities indicated in the formula by the current values of the respective items. In using this plan all costs are reduced to terms of feed and labor since all past studies have shown that these two items constitute the major part of total costs.

It is further contended that feed and labor costs together account for a definite percentage (usually about 80 per cent) of the total. In using feed and labor as the basis for calculating the cost of producing milk, it is assumed that as feed and labor prices rise or fall the other costs items and also the credit items will fluctuate more or less in the same proportion. While the costs of all items probably never change in exact unison, experience has shown that they keep near enough together to permit comparisons to be made.

The Formula Plan has the great merit of being simple, inexpensive and capable of yielding immediate results. Its great weakness lies in the fact that the kinds and quantities of feed and labour do not remain constant for any great length of time. Furthermore it must be remembered that the formula itself can only originate if an actual study of costs has previously been undertaken. Details of formulas developed in various centres may be found in Appendix 13.

The foregoing discussion may perhaps serve to indicate the several types of general procedure that may be employed in obtaining cost information and also the extent to which particular circumstances either permit or dictate the use of one procedure rather than another. In addition and in particular it may help to explain the choice of methods followed during the present enquiry. From what has been said it will be obvious that it was not possible for me to adopt any plan of procedure which would have required a representative sample of producers to keep actual cost records during a full producing year. In view of this it was decided that use of the Survey Method would probably yield the best or most reliable results under the special circumstances. An independent commission survey of costs of representative producers in different sections of the province has therefore been made. The forms used in this survey are shown in Appendix 14. In addition the evidence relating to costs submitted by a large number of individual producers as well as that presented by the provincial and regional producers' organizations has been closely studied. Some of this evidence was based on actual records kept by farmers independently, a considerable part was the result of estimates, while some was calculated with the aid of a formula such as that described above. The conclusions reached regarding costs after careful study of all the data secured will be stated later.

Irrespective of the procedure used to obtain cost information it seems necessary to indicate the nature of several major difficulties which are connected with the calculation of costs and their use as a basis for price determination. These difficulties are primarily due to the very nature of farming and the inherent characteristics of farm-cost data. One matter which presents considerable difficulty is the question of what all should be considered as cost items. In this connection the item concerning which experts seem most inclined to differ is the one ordinarily known as wages of management. Whether remuneration which a dairy farmer receives for performing the function of management, as distinct from his labour and capital, is to be included as a cost item must depend on whether his reward for managing is considered as a profit, that is the difference between his costs and his selling price, or whether it is regarded as something which he must be paid in order to induce him to produce.

While there is a real problem of accounting principle and general economic reasoning in deciding what items are legitimate parts of cost, there is even greater difficulty when it comes to evaluating many of the items that are included. Correct values are hard to establish for two reasons. One is that cost elements are often used jointly by two or more enterprises, which means that the joint expense has to be divided between the enterprises on an arbitrary basis. Very few producers who are ordinarily called dairy farmers produce and sell nothing but milk. While dairying may be their major enterprise, their products usually include several kinds of crops and several kinds of livestock, other than dairy cattle, or livestock products in addition to milk. Labour, feed, building space, equipment use and other expense items are actually spread over all of these products and the resulting joint cost is incurred in respect of the total farm production. What part of the joint cost has been incurred because of the production of milk as distinct from everything else is obviously very difficult to determine with any accuracy. While this part of the valuation problem may be relatively non-existent when considering costs of whole milk producers who, as a class, are more specialized than other dairy farmers, it becomes increasingly serious as the farms considered are generalized rather than specialized in character. In the case of creamery patrons, with many of whom the dairy enterprise is distinctly secondary, it becomes really acute.

The second reason for the valuation problem lies in the fact that many of the costs incurred do not actually involve an immediate cash outlay. At what rate should such cost elements be valued? For example, what value should be placed on the farmer's own labor or that of his wife and family, on home-grown feeds, on manure, or on horse labor? Or again, what value should be placed on the use of land and buildings owned by the farmer and how is the depreciation on dairy cattle and mechanical equipment to be estimated? Since, in all types of farming, and dairy farming in particular, a relatively large part of the total cost is composed of these non-cash elements, it is obvious that reasonably accurate values, while most desirable, are extremely difficult to obtain.

The difficulties thus far mentioned are connected with the securing of cost information as distinct from the using of it. Still further difficulties are encountered whenever an attempt is made to use cost data as a basis for price determination. Before any price can be based upon or even partially related to cost of production, costs must be expressed in the form of a single summary figure. Such a figure is hard to obtain, however, because the milk is produced by a very large number of independent operators and because costs vary widely from farm to farm and region to region in any one year and from one year to another. The fact that feed costs ordinarily account for half of the total, and that weather and climatic conditions by affecting crop yields largely determine home-grown feed supplies and, indirectly, the extent of expenditure on purchased feeds is, in itself, sufficient to explain why such cost variations exist. Since they do exist it is necessary to make two kinds of decisions if cost is to be related to price. First, in order to insure that the cost figure secured will be truly representative, the sample of producers included in a cost study must be large enough to insure that the effect of abnormal costs will be ironed out or minimized and varied enough to reflect the differing degrees of producer efficiency. Similarly the period covered by the study must be long enough to eliminate the effects of abnormal weather or other producing conditions and continuous enough to permit cost-raising or lowering effects of important changes in production methods to be fully registered.

The second kind of decision concerns the choice of an average cost. Since, in any study, the costs will be found to vary considerably from farm to farm and since only one cost figure can be used as a price-fixing guide, it becomes necessary to decide which one of the many individual cost figures or what average of all of them should be chosen. In other words, it is a question of deciding whose costs or what costs to use when trying to arrive at a figure which is supposed to represent "*the*" cost of producing milk. In this connection I know of no one who has suggested that either the highest or the lowest cost figures should be selected. A price based on the highest cost figure would obviously bonus unwanted inefficiency, while one based on the lowest cost would be entirely unfair and inadequate for the great majority of producers, and would be certain to cause serious reduction in milk supplies. On the other hand, a price equal to the simple average of all costs would be unsatisfactory, since it might result in half the producers operating at a loss. One commonly-suggested plan is to choose a figure high enough to cover the costs of the great bulk of producers who produce all but a small fraction of the milk. While this bulk-line method, as it is called, is satisfactory in certain respects, it has no real scientific basis and is somewhat arbitrary in character. Probably the most reasonable answer to this problem would be to suggest that the figure selected should be one calculated to give a fair return to all reasonably efficient producers. The trouble with this answer, however, is that it assumes the existence of some means whereby one can decide the exact figure beyond which reasonable efficiency begins or ends. Since there is no scientific way of doing this the cost figure chosen must admittedly remain somewhat arbitrary.

The foregoing discussion of some of the problems connected with the calculation and use of cost data is not intended to suggest that it is either impossible or undesirable to obtain and use cost information. At the same time it has seemed necessary to give some indication of what is actually involved in carrying out such a program. From what has been said it should be clear that the special nature of dairy farming and farm cost items make it impossible to secure cost information that is more than approximately accurate. It should also be obvious that the securing of a summary figure representing the costs of large numbers of producers, calls for specialized knowledge, requires a very considerable amount of time and is relatively expensive. Any program in respect of costs which ignores these facts is unrealistic and likely to yield very disappointing results.

POSSIBILITIES OF FURTHER COST REDUCTION

The very fact that some producers' costs are considerably and consistently lower than others suggests the possibility of reducing the general or average level of costs.

It is clear that such a result would be secured if the costs of all or even a fair percentage of the producers could be reduced to the level already reached by the lowest cost group. In considering the chances of fulfilling such a condition, however, it becomes necessary to discover the reasons for the present variation in costs. In this connection the first thing to remember is that, in order to produce milk, a great many agents or factors of production have to be combined. These agents include land, labour, feed, buildings, mechanical equipment of various kinds, the cow herself and a miscellaneous list of other things. Since all these agents cost money it follows that a producer, in endeavouring to produce milk at the lowest possible cost, must follow two main lines of action. He must try to obtain the various agents as cheaply as possible. And he must try to combine them both quantitatively and qualitatively in such a way as to obtain the largest possible amount of product from his total expenditure. To make progress along these lines the producer must be able to get and act upon many kinds of information. Some of this information is physical or technical in character while part of it is of an economic or financial nature. The fact that producers differ greatly in their ability and inclination to become informed plus the further fact that many of them, because of geographic location, financial status or other reason, are unable to make practical application of information gained serves to explain why costs of some producers are consistently higher than those of others. In this connection the highly scientific character of modern dairy farming should be borne in mind. It is no exaggeration to say that, in order to achieve real efficiency in the production of milk, a present-day dairy farmer must be nothing less than a generalized specialist. Those who exhibit this all-round ability in unusual degree are ordinarily referred to as outstanding farm managers.

What has just been said leads to the conclusion that, in the last analysis, the main requirement for the production of low cost milk is the possession of high managerial capacity on the part of the farm operator. It is quite true that milk cost studies have shown low cost to be associated with relatively large area farms, large-sized herds, high production per cow, high crop yields, efficiency in the use of labour and capital, and, particularly, large volume of business or large volume of milk sales per farm per year. Since, however, the items in this list are themselves generally associated with, or the product of, superior management, it would seem that the basic prerequisite for low costs is good farm management. This conclusion is in line with evidence given by several producer witnesses during this enquiry. I have been impressed by the extent to which good management was regarded as the factor most responsible for efficiency in dairy farming.

This relationship between good management and low costs suggests the desirability of fostering programs which might help develop a higher level of managing ability. It may well be that the number who are inherently capable of becoming really outstanding managers is relatively small. This does not mean, however, that new knowledge and improved methods cannot find fairly general application. Indeed it is only necessary to list the many developments that have taken place already to realize that tremendous increases in knowledge and improvements in methods are being effected continuously. A good illustration of this is found in the quite pronounced increase in milk production per cow during the war years, shown earlier in the chapter.

Generally, the concrete forms which these improvements take are both numerous and widely varied. They may aim at securing newer and better feeds and feeding methods, higher crop yields, the development of higher producing cows, more efficient use of labour, buildings and mechanical equipment, reduction of cattle diseases or reduction in general overhead through an increased volume of total business. In every case the general purpose is to secure efficiency gains in respect of each of the many cost items and of costs as a whole. While many such changes and improvements have taken place, and will continue to take place, there are two general facts in respect of them which should be remembered. The first is that all such improvements must of necessity be gradual in character. The second is that, after a certain amount of improvement has been brought about, it becomes increasingly difficult to effect still further improvement. In other words the possibilities of cost reduction tend to be limited by operation of the principle of diminishing returns.

Variations in cost of the type or class just discussed reflect in a general way the variations in the knowledge and ability of farmers themselves. It is precisely because they are, at least to some extent, amenable to human control, that I have seen fit to discuss them here at some length. They are the kind of variations which are perhaps susceptible to some reduction over the long run. There are, however, at least three other *general* classes of variations which should be mentioned. The first of these includes the many variations in cost from farm to farm, county to county and year to year, which are due to unusual weather conditions plus accidents of various sorts. Continuous wet weather during the 1947 seeding season, for example, is certain to result in an abnormally small crop of spring grains and abnormally large requirements in the way of purchased grain. A further result is a serious rise in costs due to the necessity of preparing seed beds several times. At the same time the effect is likely to be quite different in different sections of the province depending on the type of soil, topography of the land, amount of drainage, etc. The point to note, however, is that the variations in cost resulting from such weather conditions are not only bound to occur but are entirely beyond human control. The same is true in cases where cattle are killed by lightning or where buildings and feed supplies are destroyed by fire.

Another class of cost variations are due primarily to major and continuing differences in producing conditions in different regions or areas within the province. The result is that these variations tend to continue over the years. In most of Northern Ontario the short summer growing season, combined with the long and severe winter feeding season, make for high labour costs and heavy purchases of feed, the price of which ordinarily includes an expensive transportation charge. In addition, the relative scarcity of producers in some sections results in high cost of transporting milk. In a large part of the milk-producing area of the Niagara Peninsula, crop yields have tended, year in and year out, to be considerably below the provincial average. The particular texture of the soil in much of this area is such that the period during which satisfactory seeding can take place is particularly short. Moreover, the soil is expensive to work and especially incapable of withstanding drought conditions. In this area also, the large number of secondary industries tend to result in higher than average farm wage rates. Another example of this type of variation is found in the case of those particular farmers who supply whole milk to the Toronto market and who live in the outer zones of the Toronto milkshed. Irrespective of the degree of efficiency in transporting milk, these producers' costs must continue to reflect the influence of greater distance from market.

Finally there are the cost variations which depend upon the kind of dairy farming engaged in. Costs of producers who supply the fluid milk market must normally be considerably higher than those of farmers who ship to condensaries, cheese factories or creameries. The main reason for this is that the fluid shipper's produce when consumed is still in the extremely perishable form of milk and that consumer demand for it is relatively constant throughout the year. This means that the fluid shippers must aim to maintain a relatively even output at all times. No such requirement exists in the case of the other three kinds of producers, since the milk which they supply is not consumed until it is processed into some fairly non-perishable product such as butter or cheese. The more even production on the part of the fluid milk producers necessitates much more production during the winter months which, of course, means higher feed and labour costs. Winter-produced milk requires feed that has been expensively harvested and stored and special labour to do the feeding and cleaning. Where milk is produced in summer the main feed is harvested by the cows themselves and very little cleaning of stables or hauling of manure is required. Again, where year-round production is necessary, feeding has to be done with special care, special difficulties are often encountered in getting cows to freshen at particular seasons and the task of finding extra cows becomes both common and expensive. Other reasons why costs of fluid shippers are higher than those of the other groups are that the fluid people have to comply with much more rigid sanitation requirements and that their product often has to be brought a much greater distance to market or brought in a less transportable form.

In connection with this important matter of cost trends it is necessary to remember that at the same time that certain influences may be operating to reduce costs, other influences may be operating to raise them. Such a situation is extremely common and may, indeed, be pretty much the rule. Under these circumstances the general level of costs will tend to move up or down depending upon which set of influences is the stronger. An illustration may make this point clearer. As the result of a general herd improvement program which may involve a more careful selection of sires, artificial insemination units, regular weighing and testing of milk, and a weeding out of low producing cows, the average amount of milk produced per cow may very well be raised somewhat. At the same time that this is happening, however, the dairy farmer may be finding it necessary to pay more for the hired man who feeds and milks the cow, for the materials needed to construct or maintain the buildings or for the various types of machinery and equipment required to grow the feed and generally operate the dairy enterprise. In this connection the recent and pronounced upward trend in prices of the many things which farmers have to buy is of special significance. It is also important to note that wages of hired farm labour were never subject to ceiling levels during the war, and have continued to rise during the period covered by the present enquiry. Evidence submitted to me suggests that hired labour is going to be available in future only if wage rates, housing facilities, working hours and general conditions of employment are made distinctly more satisfactory than in the past. In view of the fact that labour costs make up a sizable part of the total cost of producing milk, it seems advisable to take special note of recent and prospective developments on the labour front. Another significant trend of recent years is the increasing prevalence of serious dairy cattle diseases. It must also be realized that the continued drive to improve the average quality of milk is bound to be accompanied by some additional cost.

What has just been said should be sufficient to indicate that trends in milk production costs cannot be considered apart from such things as the general price and wage levels, the general social standards in respect to farm labor and the general effort to obtain a higher standard product. It should also make clear why production improvements of a purely technical sort do not always mean a net cost reduction in terms of dollars and cents.

USE OF COST INFORMATION IN PRICE DETERMINATION

As already indicated, by far the greater part of the evidence submitted by producers, both individually and through their organizations, had to do with the cost of producing milk. The obvious purpose of this evidence was to show what was considered necessary or reasonable in the way of producer prices. It was clear that, in the minds of producers, price should be sufficient to cover the cost of production. Nor was there any tendency on the part of distributor or consumer interests to disagree with this view.

While it may seem not only fair and right but economically desirable as well that the price received by producers should be high enough to cover all their costs, the fact is that, in practice, such a price can be obtained only when demand conditions are particularly favourable in relation to those of supply. With a less favourable demand situation a price sufficient to cover all costs can be obtained only if somewhat less than the total supply available is actually offered for sale. Since October, 1946, for example, producers have been able to secure the price which became effective on October 1st last, but the amount of milk which they could sell at this price has been reduced considerably as consumer demand has become less effective.

Since all prices, including the so-called fixed ones, are only scientific and enforceable to the extent that they reflect conditions of demand as well as those of supply, it follows that in the setting of fluid milk prices something more than cost of production must be considered. To base these prices on costs alone would, it seems to me, be equivalent to approaching the price problem from the supply side only. In addition, even if supply and demand conditions were such as to warrant a price in line with costs, there still remains the question as to whether one calculated on some other basis might not be even more satisfactory. One other basis that has been widely advocated in recent years in both Canada and the United States is the parity price plan. This involves selection of a basic period during which the relationship between the farmers' selling and buying prices is regarded as satisfactory. Having once established what this relationship should be, the aim would be to maintain it by seeing that all farm prices in future are set at the parity level, that is the level which would give farmers the same purchasing power as they had in the base period.

While it may not always be either possible or desirable to fix milk prices at levels corresponding with costs of production, it by no means follows that cost data cannot be used to advantage when determining prices. In my opinion they should and can be used as a general guide rather than as the all-important determinant. It seems pretty obvious that any price arrived at should reflect the general supply and demand conditions and should therefore be decided upon only after the various indexes of those conditions have been carefully examined. In the last analysis, however, it must not be forgotten that the price received by the producer for milk is also the price paid by the distributor. In fact it is very likely to be a price agreed to by the representatives of the producers and distributors after a period of bargaining. Wherever such bargaining takes place it is generally agreed that a distinct advantage lies with the bargainer who has the more complete knowledge of his costs. There can be little doubt that in the milk price bargaining that has gone on producer representatives have been seriously handicapped because of incomplete knowledge of their costs.

Where producer price cannot be arrived at by mutual agreement between the two groups directly concerned and where, consequently, a price has to be arranged by arbitration, an arbitrating authority such as the Milk Control

Board would, I think, be greatly helped by the possessions of reliable information on both the costs of production and distribution. Any arbitrating authority, since it is arranging a price between two parties, must surely be concerned with seeing that the price arrived at is equally fair to both of them. One way of deciding whether any price change is equally fair to both producers and distributors is to see whether the cost-price relationships of the two groups are likely to be affected in equal degree. In cases where a price reduction is necessitated by a drop in demand effectiveness, the impact of the price reduction should, in my opinion, be spread equally between the two groups. In other words prices should be arranged so that both groups will share in the benefits or burdens of the general market situation. From the evidence I have received it would appear that the general practice in past price fixing has been to have any changes in prices charged consumers reflected in corresponding changes in prices received by producers. This has meant that distributor price margins have remained substantially unchanged. This is not true in the case of the last price increases. Whether this policy has resulted in the gains and losses being anywhere near equally shared by producers and distributors is difficult, if not impossible, to say. What does seem probable, however, is that this policy has caused the extremes between good and bad times to be much greater in the case of producers than in that of distributors. Whereas variation in distributor income has been due mainly to changes in volume of business handled rather than to changes in the unit margin charged, the income of the producer has been subject to pronounced variations, not only in the volume of milk sold for liquid consumption but also in the price per hundred pounds at which it was sold.

GENERAL CONDITIONS UNDER WHICH FLUID MILK IS SOLD

Before discussing the general conclusions of the Commission regarding the cost of producing milk and the relationship between the cost and the selling price, it may be desirable to explain briefly one or two important general conditions under which fluid milk is sold.

Sale on the Butter-fat Basis

It should be noted that, when producers sell whole milk to the distributors, the price received varies depending upon the butter-fat content of the milk. The regular or officially-stated price, when milk is used for fluid consumption, is paid for 100 pounds of milk testing 3.4 per cent butter-fat and for each tenth of one per cent below or above this figure the price is reduced or increased 3½ cents per hundred pounds. For example, if the milk tests 3.2 per cent the price paid is seven cents less than the official price, whereas, if it tests 3.6 per cent, the price paid is seven cents more than the official figure. Where milk prices are mentioned in the ensuing pages they refer to 100 pounds of milk containing 3.4 per cent butter-fat. Milk with this percentage of fat is known as standard milk.

While milk was originally sold on a weight or volume basis only, this became increasingly unsatisfactory for several reasons. To begin with, it constituted a direct invitation to milk watering on the part of a certain type of producer. In the second place it resulted in all milk being sold at the same price per 100 pounds despite the fact that some of it, because it contained more fat, had much greater food value measured in calories, and was therefore more valuable commercially than the rest. At the same time that producers shipping milk with high fat content were being discriminated against, the distributors who were able to buy this particular milk secured a distinct advantage over their less fortunate competitors.

The practice of paying the same price for milk regardless of its food value or fat content, became increasingly unsatisfactory as more and more producers selected particular breeds when developing their dairy herds. It became obvious that milk from Jersey or Guernsey cows which tested up to five per cent fat or even more was quite different from milk from Holstein herds testing in the neighbourhood of three per cent. It was also clear to producers that the cost of producing 100 pounds of the high testing milk was much greater than that involved in producing an equal amount of the lower testing article.

In order that the price paid for milk might correspond more closely with its true value. it was decided many years ago that milk should be sold on the basis of its butter-fat content. Despite the fact that other constituents as well as the fat go to determine the full food value of the product, it was felt that sale on a butter-fat basis would result in a reasonable approximation to fairness to all concerned. There was the additional fact that a relatively simple method of determining the fat content had been developed.

While sale on the butter-fat basis cannot be considered entirely satisfactory, particularly in view of the evidence of the nutritional experts mentioned at the beginning of this report, it appears to have the general acceptance of those in the industry, and no reasonably satisfactory substitute for it was suggested to me during the course of the enquiry. In saying this I am not overlooking the fact that it was suggested that bacterial tests by the use of Methylene blue dye and a sediment test might be combined with the butter-fat method of grading. Under present conditions no practical way of doing this seemed apparent. Whether it is fallacious or not, there has been a very general belief on the part of the consuming public that rich milk is the equivalent of better milk. and this belief has actually been fostered by the advertising policies of the distributors. Despite this situation one cannot help feeling that the time has arrived when a more scientific basis of valuing milk should and could be found. In this connection the following quotation from a recent bulletin prepared by Dr. E. G. Misner of Cornell University, a noted authority on dairy marketing, is extremely significant. The bulletin is entitled "Commercial Value of Milk of Different Fat Tests" and was issued in July. 1946. The quotation is as follows:

> "The method used in paying for fluid milk when all of the constituents of milk are used in commercial ways is of considerable financial importance to producers of milk containing different percentages of milk fat. When the producer separated the milk. sold the cream and kept the remainder at home on the farm, it was logical to pay him for the cream on the basis of the fat which it contained. Under such conditions, he could use the separated milk at home for feeding hogs, calves, chickens. turkeys, or for household uses. thereby converting it into income. The income that he derived from skim milk so utilized depended upon the effectiveness of the use. For example. if he had valuable purebred cattle or hogs. the feeding of separated milk to them could result in an extraordinarily high realization from its use in that manner.
>
> "But to-day, where fluid milk is delivered to a plant or handler. the method of paying for that milk on the basis of the fat which it contains is outmoded and. wherever it is now used for any class of milk. should be replaced by a more scientifically economic method of varying the price to the producer. The reason why this should be done is simple. About one-half of the food value of milk (milk energy value in calories) which

> tests 3.5 per cent is contained in the solids-not-fat, while the other half is contained in the fat itself. The solids-not-fat do not increase in the milk proportionately to the increase in fat. While the fat increases 0.1 pound, the solids-not-fat increase only 0.04 pound, or 40 per cent as much. Because the one-half of the value of the milk contained in the solids-not-fat increases only 40 per cent as much as the fat, payment to producers on the basis of fat deprives the producer of low testing milk of some of the commercial value of the product and returns to producers of higher testing milk more than the commercial value of the product. For this reason it is ridiculous to vary the price to producers for their milk in a manner which is directly proportional to the fat test of the milk. It would be more scientifically correct to vary it according to the total food value (milk energy in calories) of the milk."

Until such time as some plan is devised and adopted which will make it possible for the total food value of milk to be more nearly reflected in the price paid, the present method of selling on a butter-fat basis will probably continue. In view of this prospect the actual extent of the price variations which correspond with the variations in fat content should be carefully reviewed. At the present time fat in the milk is valued at 35 cents per pound, and this rate has prevailed for several years. Even if it is assumed that all fat should be valued on the basis of its value for butter-making as distinct from its value when disposed of in the form of sweet cream or ice cream. the adequacy of the prevailing rate of 35 cents per pound would seem to be open to question. The price of butter at the present time would suggest that the rate should be considerably higher. If milk is to be sold on a butter-fat basis the price variations resulting from variations in the fat content should at least be reasonably in line with the true commercial value of the fat. Despite the fact that it may not be feasible to make frequent changes in the price at which the fat in the milk is valued, there seems no justification for regarding the rate as something that should remain fixed indefinitely.

Under the Dairy Products Act (Ontario) 1938. Chapter 7. certain regulations were approved. Regulation 14 was as follows:

> (1) Milk received at a milk and cream distributing plant shall be purchased on the differential basis of 3.4 per centum butter-fat as set forth in subsection 3. provided that milk that tests over 4.5 per centum butter fat shall be purchased at the same price as milk testing 4.5 per centum butter fat or at a higher price.
>
> (2) A differential for the price of milk received at a milk and cream distributing plant shall be allowed for each one-tenth per centum butter fat above or below a test of 3.4 per centum butter fat and such differential shall be based on the wholesale price of creamery butter in Montreal and Toronto during the first ten days of each calendar month as reported by the Director.
>
> (3) (a) The increased differentials for the price of milk received at a milk and cream distributing plant testing 3.4 to 4.5 per centum butter fat inclusively. shall be on the following basis:

Average Price of Butter	Increased Differential in Price for Each One-Tenth Per Centum Butter Fat
Under 25 cents per pound	3 cents per 100 pounds of milk
25 cents and under 30 cents	3½ " " 100 " " "
30 cents and under 35 cents	4 " " 100 " " "
35 cents and under 40 cents	4½ " " 100 " " "
40 cents and over	5 " " 100 " " "

> (b) The decreased differential for the price of milk received at a milk and cream distributing plant testing below 3.4 per centum butter fat shall be on the reduced basis set forth in clause (a).
>
> (5) No change in the differential price of milk shall be made for a period of less than one month.
>
> (6) For the purposes of this Section "milk and cream distributing plant" shall mean any plant where milk or milk and cream is brought for the purpose of re-sale for human consumption in its natural state or pasteurized.

This regulation was rescinded by Order-in-Council on December 7, 1940. The current regulation which came into effect on the same day is No. 27 of the regulations under the Milk Control Act as prepared and drafted by the Milk Control Board of Ontario and this regulation is as follows:

> "27. Milk supplied to a distributor by a producer and required to be purchased at the basic price shall be paid for on the following differential basic price:
>
> (a) milk testing 3.4 percentum butter-fat shall be paid for at the basic price;
>
> (b) milk testing more than 3.4 percentum butter-fat shall be paid for at the basic price plus three and one-half cents per one hundred pounds of milk for each one-tenth percentum butter-fat that such milk tests over 3.4 percentum butterfat;
>
> (c) milk testing less than 3.4 percentum butter-fat shall be paid for at the basic price less three and one-half cents per one hundred pounds of milk for each one-tenth percentum butter-fat that such milk tests below 3.4 percentum butter-fat:
>
> (d) where a basic price has been established for a class of milk at an amount which is higher than the basic price for standard milk such higher basic price shall be used in connection with the payment for such class of milk."

In my view the current regulation unreasonably benefits the owners of Jersey and Guernsey herds producing very high test milk and at the same time works to the great disadvantage of the farmer whose production comes from Holstein herds. The bulk of the production of milk in this Province comes from either pure bred or grade Holstein herds.

I am at a loss to understand the acquiescence of the Ontario Whole Milk Producers' Association in the regulation made under the Milk Control Act, and I am equally at a loss to understand the failure of that Association or in fact of any producer to draw my attention, during the hearings of this Commission, to the situation set out above.

The Quota System

While some producers are fortunate enough to have all their available production taken by their distributors, this situation does not prevail in respect of the industry generally except in periods of unusual scarcity and very large consumer demand. Ordinarily the average producer is on what is called a quota. The quota system is simply a method by which the total requirement for fluid milk is rationed out among the producers so that all may get a fair share of the limited market which is available. In many markets the arrangement of quotas is undertaken by committees representing the distributors and producers.

When producers are on quota, only the milk taken from them by the distributor for distribution as fluid milk is paid for at the agreed price. Any additional milk purchased by the distributor is treated as surplus milk and paid for at the surplus price. While the spread between fluid milk prices and the surplus milk price varies slightly from market to market, it may be said with reasonable accuracy that at the present time surplus milk is sold at $1.00 per 100 pounds less than the fluid milk price.

The bases on which quotas are set will be discussed later in greater detail, together with the surplus milk disposal problem. The effectiveness with which the surplus milk can be disposed of is an important factor in determining the amount which the producer actually receives for his total product. In the meantime it may be well to keep in mind the general explanations given above when attempting to assess producer costs and income from the fluid milk market.

One other general consideration that may be mentioned in passing is the fact that all producers serve certain definite markets. The areas supplying each of these markets are popularly spoken of as milk sheds. In the organization of these milk sheds there is a great deal of overlapping and they have not been planned with what might be called scientific accuracy, but have rather grown with the passage of time. A general discussion of them in a more detailed way will be found in the chapter dealing with transporting of milk from the producer to the distributor as, logically, the problems they involve seem to be more closely linked with those of transportation.

FINDINGS IN RESPECT OF MILK PRODUCTION COSTS

The steps taken to obtain reliable information regarding the actual cost of producing milk have been outlined above. Very careful study was given not only to the considerable volume of evidence relating to costs submitted by individual producers and producer organizations, but in addition an independent survey was undertaken on behalf of the Commission to supplement and to verify this evidence. This was undertaken in weather conditions last winter which added to the difficulties, but by and large a check was made in all parts of the province.

In the result, putting the evidence and this survey together, I believe that a reasonable indication of milk production costs has been obtained during the 1946 calendar year. This is, of course, a general average for the province, and is subject to variations owing to unusual climatic conditions, variations in soil conditions, and transportation costs which affect certain specific parts of the province somewhat differently. For example, the cost of producing milk in the mining areas of Northern Ontario is, for reasons which are too obvious to mention, a heavier one than the production of the same product in, say, the long established dairy county such an Oxford.

It is also true that, for reasons which have been discussed above, the 1946 costs may differ from those of any other single year, but this is true at any given time, and merely underlines the necessity of a continuous cost study if the producer's position is to be known by them at any one time.

As I have said, a very great number of individual attempts to work out cost were presented to the Commission in various parts of the country, and there was a wide variation in these, as one would naturally expect.

In the brief of the Ontario Whole Milk Producers' League, a study was made of costs as they related to the Toronto milk shed, and it was stated they were of general application in Hamilton and the Niagara Peninsula markets.

The general survey undertaken by the Commission showed that for the most part there was not a very great variation of cost, save in Northern Ontario and those parts of the Niagara Peninsula comprising what is known as the Haldimand Clay Belt. In these two areas costs were found to be somewhat higher. A comparison of the results obtained by the Commission with those disclosed in the Hare Report, which dealt with costs during 1936 to 1939, would seem to show that these differences are relatively permanent.

The tables furnished the Commission by the Whole Milk Producers' League are set out below in full from their brief.

Prices of Items Entering Into Cost of Production

	Denom.		1943	1946
Concentrates:				
Oats	cwt.	(1)	$1.62	$1.78
Barley	cwt.		1.39	1.58
Dairy Conc.	cwt.	(2)	2.85	2.85
Roughage:				
Mixed hay	ton		9.89	10.22
Silage	ton		4.00	4.50
Labour	hour	(3)	.32	.46
Haulage	cwt.		.28	.28

Note (1): These prices do not include any charge for chopping. It is the view that this is 5c to 10c per cwt. and this might be legitimately included, thus raising the price per cwt.

Note (2): This is the wholesale price F.O.B. Toronto. It includes no freight or trucking charges to the farm. These might legitimately be included, thus raising the price per cwt.

Note (3): This is merely the cost of the actual number of hours of labour required to produce 100 lbs. of milk. These costs repay the farmer only on the basis of the manual worker and there is no allowance made for any managerial or supervision costs. Such cost might be legitimately added.

Having established, by the foregoing table, the cost of the items entering into the cost of production the following table gives the net average cost of producing 100 lbs. of whole milk on a delivered basis, i.e. delivered to the distributor.

Average Net Cost of Producing 100 *lbs. Whole Milk* (*delivered basis*)

	1943	1946	Increase
Concentrates (1)	$ .65	$ .70	$ .05
Hay (2)	.39	.41	.02
Silage (3)	.32	.37	.05
Pasture (4)	.27	.31	.04
Labour (5)	.96	1.38	.42
Depreciation (6)	.34	.44	.10
Hauling (7)	.28	.28	
Breeding (8)	.04	.06	.02
Misc. (9)	.22	.24	.02
	3.47	4.19	.72
Less credits (10)	.45	.54	.09
NET COST	$3.02	$3.65	$ .63

Note (1): This is the cost of 36 lbs. (made up of 21 lbs. of oats, 8 lbs. of barley and 7 lbs. of dairy concentrates).

Note (2): This is the cost of 80 lbs. of mixed hay.

Note (3): This is the cost of 160 lbs. of silage.

Note (4): This is 1/30 of an acre per 100 lbs. of milk on 12 months average.

All of the foregoing amounts are premised on an annual production of 8.000 lbs. of milk per cow which is well above the average. The average would be about 7,500 to 7.600 lbs. only.

Note (5): This is on the basis of 3 hours. As indicated before this is actual manual labour only.

Note (6): There are three items in depreciation, viz:

(a) Buildings at 5%;
(b) Machinery and equipment at 12½%;
(c) Herd at 20%.

Buildings were valued at $2.400 on basis of requirements for a herd of 20 cows. The same figure was used for both 1943 and 1946.

Machinery and equipment was valued at $800 in 1943 and $1100 in 1946. This again was on the basis of requirements for a herd of 20 cows. The difference between 1943 and 1946 values is accounted for by some increase in prices of machinery and equipment and to more extensive investment in labour saving devices.

Herd was that of 20 cows at $120 per cow. viz. $2,400. This price per cow is low.

Note (7): This is the figure established by the Milk Control Board and remains constant.

Note (8): This is based on the actual cost of servicing the cow and presupposes only one fee of $5.00—the cost in 1946. In 1943 it was $3.50 only.

Note (9): This miscellaneous item includes bedding, minerals, taxes, insurance, association fees, insecticides, veterinary services, telephone, etc., or so much thereof as is attributable to the dairy. This is admittedly fairly difficult to average between farmers and must of necessity be an estimate only.

Note (10): As the foregoing figures in the table are based on gross production by the farmer certain credits must be allowed as follows:

(a) milk utilized on farm—estimated at 10% of gross production;
(b) one calf per year per cow—valued at $5.00;
(c) manure produced by cow—estimated at 5 tons per cow per year of the value of $1.25 per ton;
(d) appreciation in value of cow because of present upward trend of prices. It is extremely doubtful if this should properly be included. Its exclusion would reduce the credit.

In the foregoing items of cost of production of 100 lbs. of milk it should be observed that no account has been taken of

(1) any interest to the producer on his capital investment in buildings, machinery and equipment, and herd; or

(2) any interest to the producer on any working capital made necessary because of the time lag between delivery of and payment for the milk and due to the fact that feed, etc., must be produced or purchased and paid for in quantity in advance of use.

The result of the Commission's studies are shown in the following summary table. It will be noted that there is some variation between the two. Insofar as the Commission's estimate of costs is concerned, the various elements that enter into that figure have been set out. It emphasizes also the importance of each element, the average net cost for the entire province, and the average total cost, including what is called the administration allowance to cover interest on investment and to give the farmer some profit from his enterprise. In this case, as in the tables submitted by the Whole Milk Producers' League, the figures relate to the cost of producing 100 pounds of milk for the whole milk market.

TABLE SHOWING AVERAGE COST OF PRODUCING WHOLE MILK IN ONTARIO, 1946

	Cost per 100 lbs. Milk	
Concentrates	.94	
Hay	.50	
Silage	.31	
Pasture	.28	
Total feed cost		$2.03
Dairy herd labour		$1.17
Depreciation of dairy buildings and equipment		.14
Hauling		.22
Miscellaneous		.48
Gross cost		$4.04
Credits:		
Milk used on farm	.16	
Manure	.25	
Cattle sales less cattle purchases and inventory adjustments	.44	
Total credits		.85
Average net cost		$3.19
Administration allowance		.48
Total cost		$3.67

In regard to the above table there are two or three points which seem worthy of special note. One of these is the extremely large part which the feed and labour items contribute to the total cost picture. It will be observed that feed and labour costs combined coincide almost exactly with the average net cost figure. Another fact which is really a counterpart to the one just mentioned is that the sum of the costs other than feed and labour, i.e., depreciation, hauling and miscellaneous, is completely offset by the total credits. A third point which seems to me to be particularly significant is the large credit resulting from dairy cattle sales. This credit above amounted to 44 cents per 100 pounds of milk, largely because the number of dairy cattle sold during 1946 was much larger than usual and because the selling price was relatively high. The mere fact that these sales can and do vary markedly from year to year indicates the necessity of a continuous cost study if serious attention is to be paid to cost data at any particular time. Had there been no cattle sales in 1946 the average cost of producing milk would have been 44 cents a 100 pounds higher than it actually was.

Finally something should be said in explanation of the item called "Administration Allowance". In the reports of many milk cost studies which I have examined interest on investment in livestock, dairy buildings and equipment has been included as part of the net cost. This was the method followed in the Hare study, the study undertaken by the Ontario Milk Production Committee in 1920 and 1921, the ten-year study of milk costs in the Montreal region carried out by the Quebec Department of Agriculture from 1928 to 1938, and indeed in most studies that have been made in various parts of Canada and the United States. In these studies the cost on account of interest ran from about 12 to 15 or more cents per 100 pounds, depending upon whether the study was made in a high or low value period, the rate of interest prevailing, etc. In the calculations made by this Commission, however, it has been thought preferable to calculate net cost exclusive of interest and to add the interest cost later. This has been done partly because it is in line with current business practice and partly, also, because most of the briefs submitted by individual producers and producer organizations did not include an interest item. While opinions may differ as to the method of inclusion, there seems no doubt but that interest forms a very definite part of the cost of producing milk.

In addition to interest, however, it seems to me that the dairy farmer, like any other business man operating under our free enterprise system, is entitled to a reasonable profit on his whole undertaking. Whether the amount permitted is considered as a special wage of management, a reward for risk, or a straight profit margin, i.e., the difference between costs proper and the selling price, the principle involved is the same. It is at least a social cost, something which society must expect to pay for getting the job done. Whether it should be regarded as part of production cost in the strict sense may be open to debate. In my opinion, however, it should very definitely be included in the amount of money which producers receive for their milk. To suggest otherwise would be to discriminate against the farmer as compared with other business men or to claim that nobody is morally entitled to receive any profit. As to the actual amount of the allowance as distinct from its justification, I feel that the figure here suggested is an extremely reasonable one. A comparison with normal rates of profit in other lines of business will, I believe, readily confirm this view.

When the cost figures shown in the above table are compared with the prices received by producers for their milk, certain conclusions become fairly obvious. One is that, prior to October 1st last, the average producer's returns, including the producer subsidy of 55 cents per 100 pounds, were considerably less than sufficient to cover his net cost, to say nothing about providing him with interest on his investment and something by way of a profit. This was particularly true in respect of producers in North Western Ontario and in the Niagara Peninsula area where costs were very considerably above the provincial average. In the second place it would appear that, even with the increased prices which became effective after October 1st, 1946, the price received by producers in the two areas just mentioned was still insufficient to cover the net cost of production. On the other hand, so far as producers in the balance of the province were concerned, the higher prices received after October 1st was apparently not only sufficient to cover net cost but was sufficient to meet a very considerable part of the administration allowance suggested here as well. This last statement, however, is based on a very important assumption and one that has become less and less valid with the passing of the period since last October. That assumption is that whole milk producers have been able to sell all their milk at the top price. According to the evidence presented to me, the demand for milk for fluid consumption during most of 1946 and for a considerable period previous to that, was such that all available supplies were readily absorbed. Under these circumstances all whole milk shipments were sold at the regular or official whole milk price. Since the latter part of 1946, however, a growing surplus above fluid requirements has appeared, and this surplus or secondary milk has had to be sold at the secondary or butter-fat price which, as previously stated, is very much below the regular whole milk price. What percentage of the milk produced by whole milk shippers is now being used for surplus purposes and paid for at surplus prices, I am unable to say, but I am informed that it is considerable and steadily increasing. That this is so can be readily substantiated by examining the official figures of retail milk sales.

This fact that a large and increasing part of the milk is being sold at much less than the regular whole milk price means that the average price received for all the milk shipped is being steadily reduced, the rate of reduction depending upon the percentage that has to be sold at the secondary price. This fact of a drop in the average price received has an obvious effect on the cost-price relationship. While the average price received falls as the amount sold at the surplus price increases, cost of production remains as before. It costs just as much to produce and transport the milk sold as surplus as it does to produce that sold at the regular market or quota price. In fact, it seems altogether probable that costs have risen rather than fallen in recent months. The most recent official figures of farm wage rates would suggest this to be the case. In light of these circumstances it would appear that the average price received at the present time is, at best, no more than sufficient to cover the net cost indicated above. That is, it is not sufficient to provide any interest on investment, to say nothing of any clear profit. In the light of this situation it is significant that the chief officials of the Whole Milk Producers' League, in their final appearance before the Commission, stated very definitely that the producers' organization was interested in maintaining the existing prices rather than in securing any further price increases. This stand was taken despite the fact that the existing prices were considerably below the cost figures previously submitted by the League. It was quite apparent that the League officials recognized that the amount of surplus milk was steadily increasing and that, consequently, the average price being received for all milk sold was steadily falling. Their recommendations in respect of the prices desired reflected a recognition that, under the prevailing conditions of demand as well as supply, producers were likely to be worse rather than better off with higher official selling prices.

The cost figures thus far presented relate to the province as a whole. Consideration of costs on a regional basis indicates that, during the period surveyed, costs were considerably higher in North Western Ontario and in the Hamilton and Niagara Peninsula area than elsewhere in the province. More specifically our calculations indicate that in the Kenora, Dryden and North Western Ontario districts the net cost is $3.97 per 100 pounds which, with an administration allowance of 48 cents would give a total cost of $4.45. Similarly, in the Hamilton and Niagara Peninsula district the indicated net cost is $3.47 and the total cost $3.95. An explanation as to why costs tend to be higher in these two sections of the province than elsewhere has, I believe, been offered in an earlier section of this report. Aside from the two areas mentioned, no really pronounced cost variations of a regional character were found. Because of this the cost data relating to all of the province except the two areas specified above has been grouped together. When so grouped, the representative figures resulting show a net cost of $3.09 or a total cost of $3.57 a hundred pounds. While costs were apparently reasonably uniform throughout this large area in 1946, it does not follow that a similar situation will continue indefinitely. It may well happen in the future as, indeed, it has happened in the past, that costs in a particular year will be higher in the Toronto, the Ottawa or the Windsor district than in the rest of this large area. The main point to stress, however, is that, whereas regional cost variations within this area are year to year phenomena, the higher levels of cost which characterize the North Western and Niagara Peninsula areas are likely to continue year after year.

In comparing the cost figures submitted by the Whole Milk Producers' League with the findings arrived at by the Commission after a correlation of the evidence and its own survey, there are certain substantial differences. It cannot be said, however, that the general result shows any significant difference. Part of the differences which do exist may be accounted for from the fact that the League's statement was based generally on the Toronto market conditions while the Commission's study represents the provincial average. This fact alone would account for a higher hauling charge in the case of the producers' computation and also for the somewhat heavier feed cost.

As for the difference in the amount allowed for depreciation, this is partly explained by the fact that the Commission's figure was based on somewhat lower depreciation rates for both buildings and equipment, and partly by the difference in the method used to calculate the depreciation on dairy cows. The larger credits allowed for in the case of the Commission's findings are primarily due to the very extensive sales of dairy cattle at relatively high prices during the year 1946. This particular factor was not given sufficient weight in the League's computation.

The remaining major difference may be attributed to the fact that in the Commission's findings an administration allowance of 48 cents per 100 pounds to cover interest and provide some very moderate reward for management has been included. No such provision has been made in the case of the League's presentation.

THE TESTING OF WHOLE MILK

Mention has already been made of the fact that fluid milk is sold on a butter-fat test basis, and some consideration has been given to the extent to which that basis may be regarded as satisfactory. For the purposes of the previous discussion it was assumed that there was no particular problem connected with the actual taking of the tests and that the tests, when made, could be absolutely relied upon. At this stage of the report, however, it seems necessary to discuss some important problems which have arisen in connection with the performance of the testing operation and, in particular, to consider the possibilities of eliminating dissatisfaction with the testing results.

In considering this matter the first point to note is that not only is all milk sold subject to test, but that the testing is done in the distributors' plants and by distributor employees. This situation leads inevitably to a two-fold result. In the first place it is obvious that the producer's returns will vary with the accuracy of the test. On the other hand, since the butter-fat test has economic significance and since the testing is left in the hands of the distributor, it is only natural that producers should be inclined to wonder whether the tests received are as high as those to which they are actually entitled.

The need for preventing or eliminating producer dissatisfaction with the tests as given by distributors has led to adoption of the system known as check-testing. As the name implies, arrangements have been made whereby qualified testers employed by either the producers' organization or the Milk Control Board make occasional visits to the distributor plants for the purpose of making tests with which those made by the distributors can be compared. This testing represents an important part of the work entrusted to the full-time fieldmen employed by the Milk Control Board. These fieldmen are divided into two groups. The complete task of the eight men in one group consists in making occasional checks to see that legal regulations are observed with respect to weighing, sampling, butter-fat testing and paying for milk supplied by producers. The two men in the other group undertake special investigations regarding major irregularities reported by the first group, as well as complaints made by producer and distributor organizations and special audits on behalf of the Board itself.

So far as the checking of butter-fat tests is concerned, there can be little doubt that the work undertaken to date has had a very beneficial effect. Apart from the actual correction of mistakes and the satisfaction of complaints, the very fact that a check test may be made at any time, and is actually made at least occasionally, has undoubtedly helped to deter certain distributors and reassure many producers. At the same time I think it must be admitted that even an expanded check testing service can never do more than act as a check. It would seem that, at the very best, it can reduce the number of inaccurate tests but cannot hope to eliminate them entirely.

During this enquiry the amount and character of producer evidence relative to the milk testing problem was such as to indicate that a very considerable measure of producer dissatisfaction still exists. In connection with this matter I am inclined to think that the number of actual complaints made is far from an adequate measure of the amount of dissatisfaction which prevails. My impression is that more complaints would be made were all producers fully conversant with the facilities available and procedure required for considering them. I was also impressed by repeated statements to the effect that producers have refrained from complaining about the tests because they feared the results of incurring distributor ill-will. It is clear to them that, in all but periods of unusual scarcity, a relatively large scale distributor can readily dispense with the milk of any individual producer. Moreover it is quite possible to do so since the distributor deals with each producer individually rather than with the producer organization when agreeing to take the milk. In other words, the extremely weak bargaining position in which the individual producer is placed makes him hesitate to risk weakening it still further by complaining about the butter-fat test.

In considering the possibilities of bringing about improvements in the testing situation, there are one or two things which it seems necessary to bear in mind. In the first place it is fairly obvious that it is physically or technically impossible to have the laboratory analysis made at the producer's farm, although there appears to be no reason why sampling should not be done at the farm. In the second place, it is equally clear that, since such analysis is normally made at the headquarters of the distributor and by him or his representative, the actual testing results cannot and do not represent the combined judgment of the two interested parties.

Since variations in the test represent variations in the price paid to or received by producers, it seems only logical to suggest that producers should have some direct say in the determination of the tests. In order that they might have this say it would apparently be necessary for qualified testers employed by and representing producers to actually participate in the testing work at the distributor plants. The practical problem is how to provide for this producer participation without at the same time bringing about a duplication in the number of testers and therefore in the cost of doing the testing job. While this problem is by no means a simple one I do not think that it should be regarded as incapable of solution.

In connection with this important matter I feel that serious consideration might well be given to adoption in Ontario of the plan that has been followed for several years in connection with the milk sold by the Twin City Milk Producers' Association which operates in the Minneapolis and St. Paul district. Under this plan all the testing is done in the distributors' plants but under the direct supervision of the producers' association. No attempt is made to test every can or every day's shipment of milk. Instead fresh milk samples of each producers' milk are tested four or five times each month. This method makes it possible for four producer association employees to do the entire testing job. While it is recognized that tests vary from day to day and even from one milking to the next, experience has shown that the average of a few tests taken during the period of a month gives a highly reliable figure. In employing men as testers, care is taken to see that they have had previous experience in testing work and also to see that they are properly bonded. The bonding company investigates the character of the employee for at least ten years prior to his employment by the association. After he is employed the company keeps in touch with him and, should anything develop to indicate that he is not perfectly honest, the bond is cancelled. During the association's entire experience there has been no evidence of dishonesty on the part of any tester.

According to the officials of the Twin City Producers' Association, this method of dealing with the testing problem has been extremely satisfactory. In fact it is looked upon by them as the real solution to that problem. There is no doubt that such a plan, if adopted in this province, would require a considerably larger number of testers than the number employed by the Twin City organization. On this point, however, it is well to remember that several times that number of people are already engaged in check-testing in the province. An alternative plan might be to have the testing done by employees of the Milk Control Board rather than by those of the provincial producers' association. Such a plan would more or less parallel that employed by the Dominion Government in respect to the grading of hogs in the packing plants. All things considered, however, it would probably be better to have the testing done by the producers' organization rather than to entrust it to any government agency. It seems to me that there exists in this sphere an excellent opportunity for the producer section of the industry to practise the policy of self help.

SURPLUS MILK

If the fluid milk producer produces more milk than his distributor can absorb for the fluid milk market, he has a surplus of milk on his hands.

The price which he obtains for this surplus milk is always an important factor in determining the amount he actually receives for his fluid milk. It costs him as much to produce and transport as the milk he sells at the standard fluid milk price, and if the market for fluid milk cannot absorb it he must sell it, if possible, as surplus milk. If he is not able to sell it, it is a dead loss apart from the use to which he can put it on his own farm. If he can sell it, he sells it at what is known as the secondary price which, in the case of the fluid milk market, as has been stated above, is roughly $1.00 less than the prevailing price for fluid milk consumed as such.

Since surplus milk must be sold for much less than milk used for fluid consumption, it follows that the average price for all milk produced is reduced according as the surplus portion becomes a larger part of the total. This means that, when the amount that must be sold at the surplus price becomes at all significant, the satisfactory determination of that price is just as important to the producer as the determination of the price which is paid for that part of the milk which is sold for fluid consumption. While it is undoubtedly true that no use to which surplus milk can be put can justify a price equal to that paid for milk consumed in the fluid form, it does not follow that nothing can or should be done to effect improvement in the surplus milk price. On the contrary the very fact that the surplus must be sold for less than the fluid price plus the other fact that the surplus seems likely to constitute a very considerable and steadily increasing part of the total production suggests that every possible effort should be made to obtain surplus prices that are in line with the full commercial value of this milk.

If one is to deal with the problem in detail, three kinds of surplus milk may be mentioned.

The first is the seasonal surplus. Ordinarily a larger amount of milk than at other seasons is produced in the lush pasture season during the months of May, June and sometimes part of July. This surplus corresponds with seasonal variations in farm production.

Secondly, there is a marginal surplus, that is, a surplus which a distributor must buy to protect himself against day-to-day variations in supply and in consumer demand. Under the present marketing agreements, if this milk is used for fluid consumption it must be paid for at standard fluid milk prices.

There may also be mentioned a constant surplus, which is the amount of milk available every month of the year in excess of the average daily consumption by consumers together with the marginal surplus. This results from over-production by the producer for the fluid milk market, but in practice it is extremely difficult to control. As has been stated earlier, the fluid milk producer has to arrange the management of his herd so that he has a constant supply at all seasons of the year. He must arrange matters so that he has cows freshening at different periods during the year rather than the normal time, in the spring.

In addition there is always a large potential surplus. As appears by the figures of the Dominion Bureau of Statistics cited to me by the Hamilton Milk Producers' Association, in the year 1945 fluid milk sales took only 26 per cent of the total of the milk produced in Ontario in that year. Consequently, if fluid milk prices become profitable and consumer demand increases, as it did during the war years, there is always a tendency for those farmers who have not been previously producing for fluid milk consumption to endeavour to enter the fluid producing field. This, of course, also occurs when the prices realized for cream, milk for cheese factories, and condensaries, falls sharply behind those paid for milk used for fluid consumption. There has always been a distinction between these prices because by and large production of milk for cheese, butter and the condensaries has been a seasonal one in this country, but if the returns from these are low there is always a temptation and an incentive to the farm producing for these products to change and obtain entry into the fluid milk market. With the generally increased demand for fluid milk during the war years this is what occurred. While there has been some increase in the average production per cow as the table cited above in this report shows, nevertheless by and large the increasing consumer demand during the war years was met by the entry of more and more producers in the fluid milk field.

It is obviously much cheaper to produce milk at certain seasons of the year than others. When the cows are on pasture the amount of feed and feeding which has to be undertaken is sharply reduced. Nevertheless if the producer is to effectively operate in the fluid milk field he must, as I have said, arrange his production so that he has a constant supply throughout the whole year, and this costs money. There is a great variation between individual producers in this respect. The more efficient ones have reached a stage where their supply is reasonably constant over the years; many others have not attained this objective.

It is apparent that the problem of surplus is one of the most fundamental ones to be faced by the fluid milk producer, and it is a cruel fact that the more efficient a producer becomes and the more he reduces his cost of production and increases his production per cow, the more likely he is to have a surplus on his hands.

Overhanging the fluid milk producer there is also the constant threat from the greater body of farmers who produce what I have called the potential surplus. As soon as the fluid milk producer gets himself in the position where demand increases and he is able to obtain a lucrative price, he is faced with pressure from other dairy farmers who may seek to enter the field.

The problem has been met in Great Britain by the formation of a marketing authority, with which I will deal shortly. It is a problem, however, which constantly overhangs and threatens the Ontario producer in the fluid milk field. It must, I think, also be said that this threat is likely to assume constantly increasing proportions.

The efforts being made to improve dairy herds, of course, are not confined to those producing for the fluid milk field, and over the years there appears to be a steady increase in production per cow per farm, and this increase appears to be more rapid than the increase in consumer demand for fluid milk.

This problem assumed serious proportions in Ontario during the 1930's. During the war years, with the amazing increase in consumption of milk by consumers, it almost disappeared. It has now reasserted itself and is a problem requiring the liveliest consideration by the producers of fluid milk. The information reaching me is that during recent months it has steadily become more serious, and the present situation appears to arise directly from the decrease in consumption since the increase in price in October, 1946. Consequently it would appear that the producers must either take steps to increase the demand for fluid milk by a decrease in price of standard milk which would reflect in presumably lower consumer prices, or by finding other and more profitable ways of disposing of the surplus. In respect of this whole matter reference may be made to methods adopted in other jurisdictions. In the Montreal milk market, the Montreal Milk Producers' Co-Operative Agricultural Association some thirteen years ago undertook to process and sell the members' surplus milk. Up to that time, like the Ontario Milk Producers' League, the Association had been a purely protective group financed by its own members. In January 1935 a plant was opened by the Montreal Association for the handling of surplus milk, and it has been stated that in the first year of operation ending in December, 1935, the plant handled 9,000,000 pounds of milk and that the returns to member-producers were much better than they had obtained for their surplus under the old system. In 1941, some 31,000,000 lbs. of milk were handled, and in 1946 a second plant was opened. The Association apparently takes all surplus milk from its member producers. This milk is then handled according to current requirements without competing with distributor dairies. If the dairies are short of milk, it is sold to them at standard prices, butter is manufactured and also sold to dairies, and from the skim, milk powder and casein are produced.

It was stated in a local publication recently that in the twelve-month period ending December 15, 1946, the Association received 16,855,840 pounds of milk, and from this manufactured 195,771 pounds of butter, 685,587 pounds of skim milk powder, and some 174,248 pounds of wet casein. Incidentally, it may be mentioned that included in the milk handled is milk supplied by Ontario producers living in the most easterly part of the province supplying the Montreal market.

Payment to the members, that is the producers supplying the milk, is made on a basis of butter-fat content, and is made on the 15th of each month for the preceding calendar month. In 1946 it is said that an average of 62.9 cents per pounds was paid for butter-fat, and during the first month of 1947 this materially increased. Included in this price, of course, are the current subsidies from the Dominion Government and this fact should be borne in mind. At the present time I am advised that the Toronto Milk Producers' Association has initiated steps whereby some similar operation may be developed. In my view this is a step in the right direction.

The Fraser Valley Milk Producers' Association, which supplies fluid milk to the Vancouver market, is another organization which has developed an independent program designed to yield as large returns as possible from the disposal of surplus milk. This organization has owned and operated a number of processing plants for a good many years, with the result that the average returns obtained from the disposal of its surplus has been very materially increased.

Still another example of a long and successful producer attempt to cope with the surplus problem is found in the case of the Twin City Milk Producers Organization which operates in the Minneapolis and St. Paul area of the United States. From the time it was organized some 31 years ago, the Twin City Milk Producers undertook to handle and dispose of all milk supplied by its members. In recent years considerably more than half of all milk supplied has been processed by the organization into one or other of several products. The organization owns and operates a dozen or more processing plants throughout the producing territory. The list includes several cheese factories, condensaries and one or more creameries.

The general experience of this organization in the handling of surplus milk has apparently been extremely satisfactory, particularly in more recent years.

At the time the British Marketing Scheme was inaugurated in 1933 the British producers were facing similar conditions. There was and is this difference, however, between the situation in Britain and that in the Province of Ontario, namely, whereas around 70 per cent of all milk produced in Britain was consumed in the fluid form, the most recent corresponding figure for Ontario is around 26 per cent. Since the advent of the war years the percentage consumed in the fluid form in Britain has risen to 90 per cent or better. This difference between the situations in the two countries means that the fluid milk producer would be called upon to accept a considerably lower average price in Ontario than has been true in the case of Britain. The details of the British Marketing Scheme, however, merit the closest attention.

As I have said before, I think the salvation of the fluid milk producer, if he is to get a better return, lies in his own hands, but it does not lie for the most part in his personal efforts. If, through associations like the Ontario Whole Milk Producers' League he can co-operatively build up methods of handling his surplus product, he will unquestionably in the long run be in a much stronger position and obtain better results. If the producers as a class do not so further extend their organization, I see little hope for improvement in their economic position. They are always going to be selling in a buyer's market.

MAINTENANCE OF CONTROLS FOR THE BENEFIT OF THE PRODUCER

During the course of the enquiry questions were put to most producer witnesses as to the necessity from their standpoint of maintaining the type of controls set up in the Milk Control Act. With complete unanimity they declared themselves in favour of the maintenance of the type of control exercised by the Milk Control Board in respect of producer prices. They were satisfied that if this backing of their price arrangements were removed, the chaotic conditions which occurred in the early 1930's and which led to the passing of the Milk Control Act and to the setting up of the Milk Control Board would inevitably reoccur.

It can be repeated that originally the Milk Control Act was passed for the benefit of the fluid milk producers who were at the time in a very depressed condition. It is true that their organization, the Ontario Whole Milk Producers' League, is now in a much stronger position than it was in 1933 and 1934. Nevertheless the universal opinion of those connected with the business of producing fluid milk was that they were not yet strong enough to preserve their bargaining position unless their efforts had the sanction of government authority and enforcement behind them. With this view I think I must agree. One cannot peruse the reports dealing with similar problems in other jurisdictions without finding almost universal agreement on this point, and from the nature of the facts in the case the conclusion seems inescapable.

If there is not a fixed price to the producer with the sanction of a law behind it, 16,000 or more individuals, no matter how organized, will always contain a minority who are prepared to break away and cut prices or give secret rebates to distributors. It is unquestionably true that the more reputable distributors will not engage in this kind of business, nevertheless experience in this and other jurisdictions has demonstrated that there are always some who will do so. In the result, particularly in periods of declining demand or expanding supply beyond market requirements, a situation approaching that which obtained in the early 1930 years will probably reoccur.

It has been suggested that the control is too elaborate, and that the situation might be met by the setting up of schemes throughout the province under the provisions of The Farm Products Marketing Act (1946). This Act, and

The Farm Markets Control Act which preceded it, has operated largely in connection with certain fruit and vegetable crops, such as tomatoes, sweet and sour cherries, asparagus, etc. It will be noted that these are seasonal products and do not involve year-round distribution. It has also operated in connection with cheese, which again is produced on a seasonal basis and which, if properly kept, can be preserved for a considerable period of time. There is, I believe, at the present time, a move on foot to establish some such scheme in connection with the sale of fluid cream to creameries for butter-making purposes, and it will be interesting to see how this operates. It may be that this will indicate the degree to which this legislation is applicable to a product such as fluid milk. It should be remembered, however, that the great part of Ontario butter is produced in the spring and summer months. There are, of course, a very great number of fluid milk markets in the Province and in many cases they overlap. Under the stress of the demand of the war years large markets such as those of Hamilton and Toronto reached out in all directions for supplies of milk, and in Oxford and Middlesex Counties it is possible to find farmers side by side who are shipping to London, Hamilton, Brantford and Toronto. This state of affairs was, I am advised, present to some degree even prior to the war.

Insofar as fluid milk is concerned, there is a necessity for a constant supply throughout the year and the maintaining of a uniformly high standard of quality.

It is in no sense a seasonal product. It is also a highly perishable product that can be preserved in its original form for very short periods only. The cost of producing it, particularly when the costs of labour and purchased feeds such as mineral concentrates is considered, can change drastically from time to time on very short notice.

There are also a large number of markets for fluid milk in the province. These considerations would, in my view, make the application of The Farm Products Marketing Act in its present form a very cumbersome and complicated matter. The type and degree of administration and supervision which would be called for would be vastly different from anything envisaged by any of the schemes presently in operation under this act.

It would also appear that the difficulties of enforcing these schemes might be considerably greater than the agreement under which producers operate under the authority of the Milk Control Board, and in the final result I question whether more would have been done than to replace the Milk Control Board which in its present work is a specialized body dealing with a very large and important industry by loosely organized Boards under the Farm Products Marketing Act. While there would be general supervision by the Farm Products Marketing Board, it would have to consider not only many delicate and intricate problems of the dairy industry but the problems associated with the other schemes already set up under The Farm Products Act. The experience of the Milk Control Board indicates their difficulty in adequately regulating the fluid milk business alone.

As will appear in the chapter dealing with Milk Consumption and the Consumer, there is articulate demand for more effective consumer representation on the Milk Control Board in respect of its price-fixing functions. The Farm Products Marketing Act makes no provision for the representation of such an interest. It would appear to me that the problem of enforcement would be much more difficult. This was certainly the opinion of the producer witnesses I heard. Generally speaking, the function which would have to be performed would be substantially similar to those already undertaken or which should be undertaken by the Milk Control Board. And it is open to question whether any saving would be effected in such an administration when compared with the present arrangements.

Until the producers are organized in a more comprehensive way than they are at present, it seems to me that as a class they have neither the bargaining power to deal on anything like equal terms with distributors generally, nor the capacity to protect themselves from the operations of unscrupulous distributors in particular. If, in the final result, as will be suggested later, they were able to organize themselves into a marketing authority which would have control of the sale of their products; then obviously many of the functions now performed by the Milk Control Board might well be performed by such an authority. In my view this would be a much healthier position for both the producers and the general economy at large. However, until the producers as a body are prepared to so organize themselves, my opinion would be that they need the authority of some such body as the Milk Control Board to help establish the prices for their raw products and enforce them after they are established.

At the final hearings in Toronto there was filed a formal expression of opinion of the Ontario Whole Milk Producers' League in connection with this and other related matters, and it is set out in Appendix 15.

If circumstances changed and it was decided to try to operate the producer end of the fluid milk business under the provisions of The Farm Products Marketing Act, I would suggest that careful attention be given to the provisions governing and the procedure followed in marketing milk in the State of New York. Many provisions similar to those found in the New York statute and the regulations might well have to be considered. A brief summary of the scheme as it operates in New York was filed before me and from additional investigation I believe presents a brief but accurate picture of its operation. It was stated to me as follows:

NEW YORK STATE MILK MARKETING SCHEME

> "The milk marketing scheme has been in effect in the State of New York for many years and takes the form of various regional schemes in that they are known as Milk Marketing Areas. Under the provisions of the State of New York Agriculture and Markets Law the Commissioner of Agriculture and Markets is entitled to issue an official order to regulate the handling of milk produced for sale in an area defined by the said order and known as the milk marketing area. The official order so issued includes detailed regulations for the handling of milk in the area, fixing of the price to be paid for the various classes of milk produced, the licensing of producers, marketers, collection co-operatives, milk plants, distributors, etc. The actual sale of milk is principally handled through pooling plants which are licensed by the Milk Administrator appointed under the Act. The Milk Administrator has the duty to fix the price for all milk produced for sale in the area fixing the same by the purposes for which the milk is used and fixing also the haulage costs and other charges to be made by milk handlers and milk producers. The actual payment for all milk sold is made individually by each distributor or processor to the producer but in many areas collecting co-operatives have been established which collect for all milk sold through them and in turn make payment to their producers."

CURRENT PRICE RECOMMENDATIONS

In respect of the prices to producers arrived at under agreement made between the producers and distributors in September of 1946, which initiated the present price structure to the consumer, it will be observed that since this price increase, owing doubtless in part to the increase itself, to the changing economic conditions arising in the after-war period and to the pronounced increase in the cost of living generally, the consumption of milk between May, 1946, and May, 1947, has decreased approximately 10 per cent. However, comparing September, 1946, the last month before the price increase, with May, 1947, there is in May an increase in consumption of 2.7 per cent. In my view this indicates that under present conditions of large volume consumption, any increase in price to the consumer will only result in a further decline in demand from consumers.

This, I believe, is recognized also by the Whole Milk Producers' League. In the presentation of their brief at the sittings of this Commission held in Toronto, they formally abandoned their request for any higher producer price at the present time. This was done despite the fact that they had filed a brief indicating that the price of $3.45 per cwt. for standard milk in the Toronto markets was not sufficient to meet their average costs of production. This position was taken, in my opinion, because decreasing demands were resulting in substantial increases in the amount of surplus milk. This could only be expected under the conditions prevailing. After some years of capacity demands it again brought very forcibly to the attention of the producers the fact that the price they could obtain for their product in the long run must be modified in the light of consumer demand as well as their own costs. As Mr. A. E. Coleman, an accountant employed by the Toronto Milk Producers' Association said: "Quite a considerable portion of the milk going to distributors was now surplus milk and paid for at surplus prices." As he observed, speaking of the surplus milk situation in the year 1947: "Quite a considerable portion is coming in much earlier this year than in previous years."

Mr. R. F. Lick, the Secretary-Manager of the League, was asked by Commission Counsel whether his association and the distributors' association were in agreement with prices as they now exist and he said yes, and he had no further recommendations to make as to the present price paid producers.

Mr. Fenton MacIntyre, the President of the Whole Milk Producers' League, was asked by Commission Counsel whether at the present moment he felt that $3.45 per cwt. price in the Toronto market was a reasonable price, and whether, speaking as of that date, that is March 1947, the object was to hold the line at that price. He stated that it was.

In the result, therefore, I think it must be said that no increase in the standard price of fluid milk to the producers can be recommended at the present time. Any further decrease in consumption will inevitably result in a larger supply of surplus milk in the hands of the producer, with a corresponding decline in the average price which he receives.

In the result, therefore, it would appear that, despite his apparent cost position, the producer has reached a maximum price under present conditions. There is an urgent necessity on him to further reduce, if possible, his cost of production, or to discover, as has been previously indicated, more lucrative ways of disposing of his surplus milk. His salvation lies substantially in his own hands, and as I see it, it is only through enlarging the functions and capacities of the Ontario Whole Milk Producers' League, that there is any real hope for the producer obtaining better returns.

Producers as individuals can, of course, obtain some relief to the extent that more efficient production methods can be followed. There are many ways of achieving this objective. For example, something substantial has been done, and more will probably be done in future, in improving the dairy herds of the province through the introduction of improved blood strains. One of the avenues of approach to this is the setting up of artificial insemination stations, which in certain parts of the Province has been done by groups of farmers co-operatively. Another method of improving the quality of the herds is that undertaken by the dairy farmers of Essex County who, in conjunction with the Ontario Department of Agriculture, have employed an expert to keep production records for a selected list of herds, and as a result of his over-all experience to suggest better means of improving both feeding and breeding of dairy animals.

There are countless ways in which the dairy farmer can improve the efficiency of his production but it is, I think, obvious that in a great many cases any improvement must come through joint and co-operative efforts of himself and other dairy farmers. Probably the best source of information in respect of such methods is available through the work of the Ontario Agricultural College, and through expanded research and assistance generally to the producer on the part of the Ontario Whole Milk Producers' League.

As I have said before, there is in my opinion a very definite obligation on the dairy farmer to pursue these objects. In the public interest he is not entitled to have the protection of government authority for the prices paid him unless he, on his part, is prepared at every opportunity to reduce the cost of his product which, in itself, is a necessity for the consuming public in the province at large. In any event, increased efficiency in production is always in the general interest.

MARKETING SCHEMES

One cannot examine the producer's general position without coming to the conclusion that the eventual solution of the difficulties facing whole milk producers, and probably all milk producers in the province, lies in the setting up of a marketing organization that will control the disposal of all milk produced by fluid milk producers for the fluid market, and ideally of all milk produced in the province.

From the evidence that I have heard, this seems to be an inescapable conclusion. Nevertheless, equally from the evidence, I can only say that at the present time I question very much whether the farmers in Ontario in general, or the whole milk producers in particular, are ready for such a drastic move. However, in my opinion it is the ultimate and only effective solution of their marketing difficulties.

It was notable that the criticism directed at this proposal by the distributor witnesses was based chiefly, if I may say so, on sentimental grounds. What they particularly regretted was the severing of the intimate personal ties that had grown up between producer and distributor. Nevertheless, I think the facts of the case render such a divorce desirable, and economically speaking almost imperative.

Various schemes have been proposed, and thinking among the whole milk producers at least has reached a point where some such scheme is being seriously contemplated and studied. It, undoubtedly, plays a larger part in the thinking of those producers supplying the condensaries and cheese factories. The supplementary brief filed before me on behalf of the Ontario Concentrated Milk Producers' Association discussed at some length the milk marketing scheme in force in the United Kingdom, and in conclusion the brief suggested that some scheme of milk marketing was necessary for the welfare of Ontario milk producers, and stated:

"(1) THAT a marketing scheme for all milk produced in Ontario would appear to be desirable for the general welfare of the dairying industry.

"(2) THAT in the time available to the Commission it is impracticable to formulate a scheme which would be suitable to Ontario conditions.

"(3) THAT it would be desirable for the Ontario Department of Agriculture to commence immediately a thorough study of Milk Marketing with a view to propounding a scheme suitable to Ontario conditions and in such study the Department should co-operate with the joint Ontario Committee already established by the different producers' associations."

I question whether thinking has progressed far enough among the milk producers of Ontario to justify the establishment of such an all-embracing scheme as yet. On the other hand. I would suggest that a commencement might be made by establishing a marketing scheme with the force of law behind it in selected areas in respect of those producing for the fluid milk market. Such a scheme might be handled under the direction of the Milk Control Board or might be more effectively worked out by the Ontario Whole Milk Producers' League itself with whatever government assistance and backing, particularly in respect to enforcement, which might be found necessary.

It is quite true that in comparing conditions in Ontario with those of the United Kingdom, one has to remember that in the United Kingdom there is a serious deficiency of dairy products and that generally speaking the country is always on an import basis in respect of them. The position in Ontario is different in that a large amount of cheese and milk manufactured in Ontario is sold outside of the province. either in the other provinces of the Dominion or overseas. These differences. however, do not affect the fundamental similarity of the producer problems existing and the basic solution required. Any differences which exist are primarily matters of degree and affect the technique of marketing the product rather than the general principles involved. There are. of course, very elaborate provisions in the English scheme in respect of the administrative organization. and it may well be that these would require some modification to meet the special needs of Ontario conditions. but so far as the basic plan itself is concerned I would recommend it as a model for study and possible imitation.

In the five-year review of the milk marketing scheme in the United Kingdom, published by the Milk Marketing Board in 1938, it is stated:

> "By 1932 the bargaining strength of producers had weakened considerably. There was under-cutting in the retail market; prices of imported butter and cheese had declined to such an extent that manufacturers at home could not compete, and much of the milk normally used in creameries was sold on the liquid market at very low prices.
>
> "The whole price structure of the industry was rapidly becoming unstable, and it was eventually realized that recovery could not be achieved through voluntary efforts."

I think these words might have been said with equal truth of conditions in Ontario in the years 1933 and 1934. It is quite clear that at that time in the United Kingdom the sale of milk was unremunerative to a large number of dairy farmers, and that the increasing pressure of producers on remunerative markets was becoming a dangerous factor making for even more serious reduction of prices.

The result of this situation was an investigation by a Commission under the Chairmanship of Sir Edward Grigg, which finally resulted in the setting up of the scheme under the provisions of The Agricultural Marketing Act of 1931. This was preceded by a poll of milk producers in which some 96 per cent voted in favour of the scheme. Quite obviously no such scheme could be successfully organized in Ontario unless it had the support of a very large percentage of the producers.

Executive authority under the British scheme is vested in The Milk Marketing Board, which consists of fifteen producer-representatives with two independent members who are co-opted after consultation with the market supply committee. The scheme provides for the election of Board members by the producers themselves. Twelve are chosen from the regions into which the country is divided, while three are special members elected by a national vote of the producers. For purposes of administration the country is divided into eleven regions and for each region there is allotted a committee consisting of county representatives of milk producers. These regional committees act in an advisory and consultative capacity to the Board and they are brought together when matters of major importance arise.

While this scheme has been modified in some respects by war conditions in the United Kingdom, it still continues to function effectively as an instrument of the producers themselves.

The principal powers of the British Milk Marketing Board are laid down in detail in the Scheme, and may be summarized briefly as follows:—

(a) To prescribe the description of milk which may be sold, its price, the persons who may sell it, and the terms on which it may be sold:

(b) To regulate the grading, packing, storing, adapting for sale, insuring, advertising, and transportation of milk on behalf of producers;

(c) To exempt any class of producers from the operation of the Scheme. (Any producer not so exempted is subject to the regulations of the Board);

(d) To impose penalties upon producers contravening the regulations.

The Board also has various other powers, such as the right to buy and sell milk, and to encourage and promote agricultural co-operation, education and research, etc.

The Board has regulated the sale of all milk produced in England and Wales, with the exception, for a period, of the "Certified" and "Tuberculin-Tested" grades, and supplies from certain small producers.

Regulation is in two main directions:—

Milk sold wholesale by producers to distributors is regulated by means of an annual contract setting out the prices and the conditions of sale.

Milk sold retail by producers themselves is regulated by means of a licence issued by the Board. The licence sets out the minimum retail prices below which the milk cannot be sold as well as the conditions to be observed in the sale.

These have been the two principal channels of control from the outset and they are the foundation of the whole fabric of organised milk marketing in England and Wales.

Powers are granted to the Board in the terms of the Scheme for the determination of the prices of milk. Before prices are prescribed, however, the Board must consult those who are best qualified to express the views of the buyers of milk. In practice the consultative body has been the Central Milk Distributive Committee, a voluntary organisation representative of all buying interests.

In my opinion the recommendations made to the Commission on behalf of the Concentrated Milk Producers' Association deserve very serious study and consideration. I question whether all farmers producing milk in Ontario are ready for the all-over control of the type adopted in 1933 in Great Britain. I would suggest, however, that those farmers producing for the fluid milk market might well initiate the first stages of such a scheme. I would also suggest that the larger aspects of the matter be considered and worked out without any great delay by the recently formed Joint Committee representing all four sections of the Dairy Producers.

The producer situation in Ontario has been bettered by the administration of the Milk Control Board, but it can be improved to a far greater extent through the adoption of some such scheme as I have indicated. Whether such a scheme should be operated by the Whole Milk Producers' League or as a part of the administration of the Milk Control Board, is a question depending on the direction of overall policy in respect of these matters. It will be dealt with in this light in the final chapter containing recommendations.

CHAPTER VI

Transportation of Fluid Milk

(1) *General*

The transportation of milk for fluid trade from a producer's farm to the distributor's plant is an important factor in the ultimate cost of milk delivered to the consumer. In the Province of Ontario at the present time all but a negligible proportion of milk for the fluid trade is transported by motor truck and generally by some one whose sole business is the haulage of fluid milk from producer to distributor. On the average, three-quarters of a cent out of the price paid by the consumer for each quart of milk has been devoted to the transporting of that milk from the farm to the dairy. If this sum represents the cost of bringing an adequate supply of milk of a proper quality to the market, avoiding excessive waste and duplication of effort, then it represents a fair charge to the consuming public, and it is from this point of view that the problem will be examined.

(2) *Legislation and Regulation*

The transport of milk by motor vehicle is governed by the Commercial Vehicle Act, R.S.O. 1937, Chap. 290, and the regulations passed to implement this Act. With the exception of a farmer who chooses to haul his own milk to the dairy, any person or firm desiring to enter such a business is required to apply to the Minister of Highways for a Class "E" license under this Act. The applicant is required to specify the route that he proposes to serve and to produce evidence that the public need for such a service is not being adequately met by existing licensees. The application is then referred to the Municipal Board for consideration and the Municipal Board in turn, having notified any interested producer and distributor and transport organizations already in the area, refers the application to the Milk Control Board for approval or otherwise. If the Milk Control Board opposes the application it is my understanding that such application is invariably refused. The foregoing limitations apply with equal force to a producer who undertakes to haul, in addition to his own milk, that of his neighbours, and equally to a co-operative venture by a group of farmers. With the exception of three organized markets, this is the extent of control now exercised over this part of the industry.

In addition to The Commercial Vehicle Act and its regulations, the transporter of milk is subject to the regulations passed pursuant to the Milk Control Act, R.S.O. 1937, Chap. 76. Each transporter is required to obtain from the Milk Control Board an "M" license annually. Section 15 of the regulations under the Milk Control Act provides that "no licensed transporter shall change his route, add new shippers of milk or transfer shippers from one plant to another unless the change has been approved by a joint milk transport committee recognized by the Board for the market, or permission has been secured from Board." This regulation, which in effect freezes the organization of milk routes throughout the province, automatically makes the haulage of milk a matter of importance to the producer and distributor as well as the hauler.

(3) *Organized Markets*

In the Toronto, Hamilton and Guelph markets agreements have been entered into which have been approved by the Milk Control Board, setting up a joint transport board for each of these areas and specifying the rates to be charged for the haulage of milk to these markets. The Milk Control Board Order relating to the Toronto market is No. 39-15 effective June 1st, 1939, and is, for easy reference, attached as Appendix 16 to this report. The Order relating to the Hamilton market is No. 45-12 and that relating to the City of Guelph is No. 46-6. In each of these areas a joint committee on milk transportation has been authorized and appointed, consisting of 15 members in the Toronto market and 9 members in each of the Hamilton and Guelph markets. The Local Milk Producers' Association, The Local Milk Distributors' Association and The Local Milk Transport Association each appoint an equal number of members to the joint committee. These committees operate as boards of arbitration to deal with differences between the producers and shippers and to deal with the question of variations in rates as between producers and individual shippers, and generally to bring such rationalization to the trucking industry as is possible. The evidence indicates that, generally speaking, these joint committees have worked satisfactorily and have been of considerable assistance in the organization of this important department of the milk industry.

(4) *Transporter*

To understand the problems involved in any administration of milk transport, it must be realized at the outset that over a period of years each milk route has become a vested interest, a definite commercial asset of the owner of such route, having a value in the Toronto milk shed which may be calculated on the basis of $80 to $100 per can including equipment. Routes are readily saleable at such prices.

For convenience the Toronto milk shed will be referred to frequently, because it is an organized market and also because of the fact that it represents 31 per cent of the total fluid milk market in the Province of Ontario. In this market approximately 3,727 producers ship 14,570 cans of milk by truck every day. In addition, one company receives milk by rail from time to time. In the month of May, 1947, 1,081 cans, or 35 cans per day on the average, were shipped by rail from the Woodstock receiving plant of this company to its Toronto dairy. The amount shipped by rail in this market is obviously negligible, but for comparative purposes it may be noted that the baggage and haulage costs are less than twenty cents per 80 pounds, whereas by truck the rate from Woodstock would be thirty cents.

There are some 88 independent operators trucking milk into the City of Toronto, of which 54 are single truck operators, usually driven by the owner, and the balance of 34 transporters operate from two to eight trucks, making a total of approximately 169 vehicles. In addition to the independently operated transports, there are some 39 vehicles owned and operated by distributors in the City of Toronto. These 218 vehicles, ranging in size from under three-ton capacity to over ten-ton capacity, travel daily distances up to 100 miles from the City of Toronto to transport fluid milk for this market. In the month of May, 1947, the milk transported by truck into this market represented the following distances, rates and from the number of shippers and in the volume shown below.

Distance	Truck Rate Per 80-lb. can	No. of shippers in zone rate	No. of cans in zone rate
15 miles and less	18c per can	232	31,070
For 20 miles and over 15 miles	20c	761	85,938
For 30 miles and over 20 miles	23c	574	69,712
For 45 miles and over 30 miles	25c	945	113,109
For 65 miles and over 45 miles	28c	616	73,933
For 90 miles and over 65 miles	30c	459	58,774
Over 90 miles at	32c	17	1,937
Over 90 miles at	33c	44	5,737
Over 90 miles at	35c	52	6,237
Over 90 miles at	40c	4	464
		3,704	446,911

(a) For distances over 90 miles the rate is not fixed, but is subject to agreement between producer and trucker.
(b) In addition to the foregoing, 23 producers haul their own milk to the Toronto market to the extent of 4,815 cans daily.
(c) The figures quoted above were from the records of the Toronto Milk Distributors' Association.

From the foregoing figures it will be seen that, apart from the small number of producers who truck their own milk to the market, 566 shippers, or 15.3% of the total send daily 73.149 eighty-pound cans, or 16.3% of the total daily shipment, and these shippers and this amount of milk come from distances in excess of 65 miles from the City of Toronto at a cost of 30c or more per eighty-pound can, which practically speaking is the equivalent of one cent per quart. This means that a substantial proportion of the daily milk requirements of the City of Toronto comes from farmers beyond Port Hope, Lindsay, Shelburne, Guelph, Paris and Brantford. It may be that, were it not for the fact that the producer bears the initial cost of shipping, and that so long as the producer supplies a steady volume of milk of suitable quality, the distributor has no interest in the distance which the milk has to travel before reaching market, producers would be found considerably closer to the market than is the case at present.

Bulletin No. 417, dated June, 1941, of the Ontario Department of Agriculture, is a study of milk transportation in the Toronto milk shed made by the Economics Department of the Ontario Agricultural College and the Milk Control Board of Ontario, and represents a detailed study for the years 1938-39 of milk transported into this market. I am informed by Counsel for the Toronto Milk Transport Association that, with the exception of the changes resulting from an increased number of shippers (3.727 in 1947 as compared with 3.127 in 1939) the volume of milk hauled daily (14.570 cans in 1947 as compared with 8,972 in 1939) and the general increase in costs, etc., resulting from wartime conditions, the observations made from that study with reference to duplication of service, the effect of capacity loads and concentration of shippers on routes, are as valid to-day as they were in 1939. At that time there were 161 milk routes in operation as compared with 208 in 1947, and for the purposes of the study 89 routes operating in different zones were examined in detail. The vehicles operating on these routes travelled daily 3.455 miles. On 1.562 of these miles there was only one truck operating, on 291 miles two trucks, on 162 miles three trucks, on 93 miles four trucks, on 71 miles 5 trucks, and on 17 miles six trucks. These mileages are the mileages covered from the time of the first pickup of milk to the last. and do not include what is called "bobtail" mileage or the distance travelled from the distributor to the first shipper and from the last shipper back to the distributor. The overlapping pickup mileage amounted to 1,260 miles daily and the overlapping bobtail mileage to 2,064 miles. The economist studying the matter at that time had this to say of this overlapping service:

> "It will, therefore, be seen that because of overlapping service on about 30% of the roads and because of the use of unnecessary trucks, a total unnecessary daily mileage of 3,324 miles is travelled. This estimated unnecessary mileage amounts to 22% of the total mileage travelled, and at ten cents a mile puts an extra daily cost of $332.40 on the cost of milk, or an extra and unnecessary cost of $120,326.00 each year."

It may safely be assumed that there has been no diminution of overlapping service. No over-riding authority has directed the rationalization of milk hauling routes, and any changes that have been made have been the result of arrangement between individual truckers, trading shippers for their own convenience, and represent isolated cases only.

The evidence before me, both from producers and transporters, indicates that the truck driver himself plays an important part in the human relations between producer and distributor. In the brief of the Toronto Milk Transport Association, the following appears:

> "In the majority of cases it would be found that the trucker was responsible for bringing the producer and the distributor together. The dairy required milk, the trucker searched the country for it; the farmer desired a market, the trucker found a dairy for him. In many instances the farmer has never been to the dairy nor met a dairy representative, and similarly no one from the dairy has been at the farm. If the farmer has a complaint as to an error in his milk statement, his test, rejected milk, etc., the trucker is the first to learn of it, and the farmer has expected him to save him a trip to the city by looking after his difficulties for him. This he gladly does. In the case of rejected milk he goes to the farm at milking time to watch and see if he can make any suggestions that would eliminate the trouble—and generally he can. Additionally, he gladly does many little personal favours, such as bringing in a broken part, leaving it to be fixed, and returning it, or picking up some items urgently needed, etc."

The foregoing, in my view, overstates the case to some extent, since the larger and more progressive distributors maintain a field force which makes direct contact with the producer. There is no doubt, however, that the truck driver, as a person, does represent an important human link in the chain between farmer and consumer. He is in effect the only real middle man in the industry. Under the regulations of the Milk Control Act, quoted above, even in those cases where there is a duplicate service, if a producer is dissatisfied with his trucker, or a trucker wishes to make an alteration in his route, changing shippers, this can only be done on consent of the Milk Control Board. Consequently, in view of the regulations, the personal relationship existing between trucker and producer, the vested interest of the trucker in his route, and the effect of practices establishd over a number of years, there is little, if any, encouragement to rationalization of transport routes to eliminate waste. Although the cost of the transport of milk for the most part represents only a fraction of a cent per quart, in the aggregate it represent a very large sum annually which comes out of the consumer's pocket. Hence, in my view, action should be taken to overcome the tendency to preserve the status quo and to eliminate waste and duplication where possible.

The Toronto Milk Transport Association, in Exhibit "D" to their brief, submitted an auditor's report covering 20 truckers into the Toronto market, showing comparative figures for 1939 and 1945. These truckers operated 55 trucks in 1939 and 68 in 1945, representing approximately one-third of the total. The auditor for these truckers reports that "Operating costs have increased from 20.45 cents per can in 1939 to 22.75 cents in 1945. Profit per can has dropped from 3.40 cents per can in 1939 to 1.42 cents in 1945. . . . While in 1945 revenue had increased 47.98 per cent over 1939, certain expenses had also increased in a much greater proportion, e.g., gasoline, oil and grease, 70.94 per cent; truck repairs, 178.51 per cent; tires and tire repairs, 160.32 per cent; and wages, 77.93 per cent." For these twenty operators a total cartage revenue of $365,004.21 was received in 1945, as compared with $246,654.68 in 1939. In 1939 the net profit of these operators, before income tax, amounted to $35,102.70 or 14.24 per cent of revenue, and in 1945, to $21,526.48 or 5.90 per cent of revenue. The significant fact is that in the face of sharply increased costs, and without any change in haulage rates, the increase in volume hauled by these truckers enabled them to continue to show what on their own figures may be considered a very handsome profit. What additional benefits they might have derived as the result of a general rationalization of routes and a concentration of shippers, with resulting elimination of unnecessary and waste mileage, can only be conjectured, but it seems only reasonable to assume that such changes would have permitted these operators to show an even larger volume of profit in 1945.

The foregoing figures, as stated, have been taken from the evidence submitted by the Toronto Milk Transport Association. These figures should be compared with the report of Mr. John S. Entwistle, attached as Appendix 17.

The rates fixed for transport haulage, either by agreement approved by the Milk Control Board in the case of organized markets, or by direct agreement between producer and trucker in other areas, are collected by the distributors by means of deductions made from the purchase price of the milk received by each distributor from each producer, and are paid to the trucker by the distributor. Thus, where a rate or a price has been fixed for 100 pounds of fluid milk at, say, $3.60, this represents the gross rate to the producer, but out of this the trucking rate must be paid. Hence the cost of trucking is always calculated by the producer as a part of his cost. Therefore it may be taken that the transporter is the agent of the producer for the purpose of carrying the producer's milk to the distributor and, as stated above, the distributor has no interest in the distance which milk is transported since the price which he must pay to the producer is fixed for the market where it is sold without regard to the location of the producer's farm. Similarly the decision as to how much, if any, surplus milk any producer ships to the dairy is that of the producer alone. In times of lush production a producer having no other outlet for his surplus milk may use a substantial part of trucking space for the carrying of milk destined for other than the fluid market. The trucker is his agent and the farmer can employ him as he sees fit. It would seem to follow that this factor may tend to cause the employment of more transport service in any particular market than the fluid trade alone requires.

(5) *The Producer*

As will be seen from the foregoing, the producer is vitally concerned in the transportation problem. He makes the arrangement for transport, selects his trucker where there is any alternative, pays him for his service and has daily contact with the distributor through the truck driver. At the annual meeting of the Ontario Whole Milk Producers' League held in Toronto on the 19th and 20th of February, 1947, the following resolution was adopted:

> "WHEREAS under the Public Commercial Vehicles Act it is virtually impossible for producers to transport their milk from their farms to the dairies co-operatively.
>
> "THEREFORE BE IT RESOLVED that we ask the Ontario Provincial Government to amend the Public Commercial Vehicles Act making it possible where any group of producers decide that it is in their best interest to transport their milk co-operatively without obtaining a P.C.V. license."

On this point a considerable volume of evidence by responsible officers of the Ontario Whole Milk Producers' League indicated that body is of the opinion that, in the case of organized markets, any group of producers proposing to truck co-operatively should have to establish their case for the new service before the Milk Control Board, but that in unorganized markets, which represent the bulk of the province, the right of producers to truck co-operatively should become virtually absolute instead of being non-existent as at present. A further resolution was adopted at this annual meeting as follows:

> "WHEREAS the cost of transporting milk from the farm to the market is a factor that must be taken into consideration in milk costs to the producer;
>
> "AND WHEREAS the volume of milk carried and the mileage travelled has an important bearing on the cost of transportation;
>
> "AND WHEREAS the milk is the property of the producer until it arrives at the designated market and accepted by the distributor:
>
> "THEREFORE BE IT RESOLVED that the Ontario Whole Milk Producers' League request the Royal Commission now inquiring into the cost of producing, processing, distributing, transporting and marketing of milk, taking into consideration the savings that could be effected by local producer associations transporting all the milk from the farm to the plant of the distributor, the number of trucks that could be eliminated, the saving of miles travelled and the overlapping of trucks, to recommend amending the Milk Control Act, vesting the Milk Control Board with authority to license all truckers of milk from the farm of the producer to the distributing plant, and with authority to arbitrate and fix charges for this service."

On this point the Producers' Association indicated that it was their opinion that the mere granting of power to local producer associations to go into the milk transporting business as such would, in itself, be a sufficient lever to bring about what they considered much needed reforms in the trucking business, with consequent substantial savings to the producer. The Producers' Association seemed to assume that any such savings would automatically accrue to the benefit of the producer and not to the consumer who, of course, ultimately pays all costs.

(6) *The Distributor*

The distributor's chief interest in the transport problem lies in insuring regularity of delivery according to the laid-down schedule, and in safeguarding the quality of the milk as it arrives at the dairy. There are some distributors, however, who have taken over on their own account the ownership of the transports required to haul milk from the farms. The evidence showed that one substantial dairy in the City of Windsor which was charging rates the equivalent of or slightly lower than those charged by other transporters, was showing substantial profit in this department. On the question of distributor-owned transports under the existing system where the producer pays the initial cost of transport by deduction from the gross price of milk, the Toronto Milk Transport Association has this to say:

> "Toward the end of 1933 and through 1934, many dairies seemed determined to get into the transport field. In some cases, the distributors did so in a legitimate manner with little disruption of service, purchasing routes from the men then operating them. However, from a number of instances, two important objections became apparent. The distributors would by-pass the Producers' Association and seek to get cheaper milk with promises of special deals to individual farmers; and secondly, when starting into the trucking field, it was a practice of some dairies to throw out shippers who had been shipping to them in order to take on new ones grouped in an area convenient to their own trucks."

It is, of course, a fact that the Whole Milk Producers' Association is stronger and better able to protect the legitimate interests of its members than it was in 1933 and 1934, and, further, the Milk Control Act has come into force since that time. There are, therefore, deterrants at the present time to one of the evils referred to in the above quoted passage: in that the possibility of acquiring cheaper milk by promises of special deals to individual farmers would be much more difficult to accomplish. It is significant, however, that even under the present system where the producer bears the initial cost of transport, that on the evidence of the Transport Association distributors going into the hauling business tended at once to rationalize and shorten transport hauls. The question immediately arises as to what would be the situation if the distributor were required to pay the initial cost of transport and hence had a financial interest in the distance travelled.

(7) *The Consumer*

The simple interest of the consumer in this problem should be mentioned, because it is too easily overlooked. The fact of the matter is, that regardless of who pays the initial cost involved in transporting milk from farm to distributor, that cost ultimately comes out of the price paid by the consumer for the processed product. It seems to me only fair, therefore, that the consumer should pay not one fraction of a cent more for this essential food than is required to cover the cost of reasonably efficient operation, and that he should certainly not be called upon to pay for the perpetuation of any system merely because a change would adversely affect a so-called vested interest. In my view this aspect of the situation is overlooked in the representations made by the Whole Milk Producers' Association.

(8) *Equipment and Methods*

In the Province of Ontario, as already stated, the first haul of milk is almost entirely done by motor transport of various types and sizes. Transports range from small vehicles of a type that can be used for any general haulage to very large vehicles refrigerated and capable of carrying loads in excess of ten tons. In a few instances tank vehicles are used, but these are rare. It has also been noted that the trucking rates vary in the Toronto market from 18 cents per 80-pound can up to 40 cents, depending upon the distance from market. In New York State a rather different system is in practice which is, no doubt, traceable to the enormous influence of the New York City market for fluid milk. In that State the great bulk of milk is transported by motor truck to local depots and then trans-shipped by rail to New York City. Revised Official Order No. 126, which became effective October 1st, 1946, of the State of New York Department of Agriculture and Markets, Division of Milk Control, regulates the handling of milk to be sold in the New York Metropolitan milk marketing area. At page 19 of this Order the transport rates for milk to be used for various purposes in the New York Metropolitan market are set out. The producer who ships by truck or rail for a distance of 191 to 210 miles from the City of New York receives the full gross price per hundred pounds of milk. Producers who ship from distances within this radius receive a premium over the gross price which ranges up to 15 cents per hundred pounds for distances less than ten miles. At distances of 500 miles from the New York Metropolitan area a deduction of 14 cents is made from the gross price per hundred pounds paid to the producer. From these figures it is evident that a shipper into the New York City market is in a position to transport his milk by freight for a distance of 500 miles at a cost of 29 cents per hundred pounds or the equivalent of 24 cents per 80-pound can, whereas a shipper in the Province of Ontario would pay 24 cents to transport an 80-pound can a distance of 30 to 45 miles. It should further be noted that, although the bulk of milk in New York State is transported by rail, the same rates apply to motor transport.

The milk remains the property of the producer until it has been delivered at the distributor's plant and accepted as meeting the minimum requirements for the purpose for which it is to be used. The can is then weighed and samples taken to determine butter-fat content which, of course, determines the price to be paid to the producer. In some small dairies, no doubt, the workman handling the milk knows whose can of milk he is handling at the moment, but it is obvious that in any sizeable dairy the employee who does the mechanical work of weighing, inspecting and sampling a can of milk has no knowledge or interest in the source of the milk and only sees a code number on the can. This point is particularly mentioned since evidence given by representatives of the Whole Milk Producers' Association indicated that for some reason, which is not easy to understand, producers seem to feel that it was to their advantage that the title to the milk should not pass until such time as it had been accepted, weighed and sampled. In my view there is no real ground to support this opinion.

(9) *Summary*

From the evidence before me I am satisfied that the present system of hauling milk from producer to distributor is not designed to insure that milk is not hauled any greater distance than necessary and the elimination of duplication and waste. It seems to me that a chief cause of this situation is the fact that the price of milk is determined as delivered at the distributor's plant. There are, no doubt, many individual producers who are prepared to receive a slightly lower net return in order to ship milk a great distance to a market such as Toronto, and while the cost of such lengthy shipment when deducted from the individual producer's annual earnings may not be a very large sum, when that cost is multiplied by many producers in the same position it becomes a very substantial sum, all of which comes out of the ultimate consumer's pocket. I believe that if the price paid for fluid milk were fixed net at the farm, and the distributor was compelled to make his own arrangements for transporting such milk, either by contract with an individual trucker or by transport owned and operated by the distributor, a number of important alterations would result, all to the ultimate benefit of the consumer. In the first place, as is indicated by the passage quoted from the submissions of the Toronto Milk Transport Association, the distributor searching for his milk at a low cost would immediately make an effort to find a source of supply at the closest possible distance from his plant. This, it seems to me, is an obviously proper adjustment since the present system, which results in the most widespread milk sheds, is directly in the face of all economic principles. In the second place, particularly in urban markets of which the Toronto milk market is probably the best example, if substantial distributors were to take over the task of transporting milk, the amount of capital which such distributors could devote to this phase of the operation would undoubtedly result in more efficient equipment being placed on this work than is possible by a small individual trucker operating a single truck. The figures quoted, showing the maintenance of profit by transporters in the Toronto milk market area in the face of greatly increased costs, illustrate the point that maximum loads operated on concentrated routes produces a minimum cost per unit transported.

There is no doubt in my mind that payment for milk at a price determined at the farm and not at the dairy will result in some shippers in outlying areas losing their present markets, but I am convinced that after a period of adjustment the product of such shippers will reach the market which it is economically desirable that it should reach. Without minimizing the importance of the human relations between producer and the individuals with whom he is at present dealing, it is asking too much of the consumer to pay continuous tribute to the maintenance of these relations.

There is a further point to be considered, and that is that, with the exception of three organized markets, the rates charged for trucking are a matter of negotiation between individual producer and trucker. In view of the fact that the producer must get his milk to market, the relative bargaining position is poor. At the present time, if a producer is dissatisfied with his trucking service, he may be faced with the greatest difficulty in securing an alternative service. If he fails to do so his main product may never reach the market, with disastrous results to the individual producer. The question of weighing and sampling the milk, which no doubt is a serious matter, does not, however, I think, present a real obstacle to the change which I feel should be made. It surely is not beyond human ingenuity to provide a workable scheme. In the great majority of markets the actual mechanics of handling each individual can of milk would be substantially the same. However, some method of testing the milk for flavour, and freshness at the time it is picked up at the farm, would no doubt have to be provided. This does not seem to be a difficult problem. It should also be possible to take samples at the same time for butter-fat test. The principle problem is that of weight, but since the farmer is largely dependent on the integrity of his distributor, whether means of measuring the quantity by weight or otherwise at time of pick-up are developed or not, does not put the producer in any worse position than he now is. The question of check-testing, etc., is dealt with elsewhere in this report, and the views I have expressed there with respect to the protection of the producer and distributor alike apply with equal force whether the milk changes ownership at the farm or at the distributing plant.

It may be argued that, in view of the opposition to the change outlined above from both producers and transporters, some alternative method of protecting the consumer should be sought. It may be suggested that the whole question of routes and equipment should be reviewed by some competent authority, for example the Milk Control Board, and rationalization enforced. I am of the opinion, however, that this is impractical. The amount of pressure to which any administrative board would be subjected when it proposed to cut off shippers from a market to which they may have been shipping for 20 years or more, can readily be imagined, and at the best I am satisfied a very imperfect result would be achieved and one which would be full of compromises. The alternative of permitting wide opportunity to producer associations to handle their own transporting co-operatively or otherwise, is not a sufficient solution, because it overlooks the fundamental fact that the cost of transporting, regardless of how it is done, is paid by the consumer, and the methods presently employed, even if this were allowed, are too wasteful. It is possible that if the Ontario Whole Milk Producers' Association as a whole took over the co-operative transportation of milk, duplication of service would as a natural consequence be largely eliminated. I am sure, however, that milk would continue to be hauled from substantially the same farms as at present, for greater distances than are justified, and in any event it is difficult to visualize such a comprehensive co-operative transporting scheme being introduced into this province. Anything less than such a scheme would, in my opinion, merely add another competitive trucker and further duplication of service with its attendant waste and unnecessary expense. The foregoing is not intended to derogate from a recommendation which will be made in the final chapter of this report, namely, that as an immediate step producers be given the right to associate themselves co-operatively for the transportating of their own and their neighbours' fluid milk without P.C.V. license. This is, admittedly, a palliative and does not solve the major problem raised in the transporting of milk.

I feel, therefore, that steps should be taken to allow normal economic principles to govern this aspect of the industry, i.e., the distributor who supplies the consumer should be required to find his raw product at such place as provides him with the least expensive source of supply. It may be argued that the fixation of price of raw product at the farm instead of at the distributor's plant, while it should quickly bring about the elimination of unnecessary long hauls, would not in itself eliminate duplication of service on roads. This may be very true, especially under circumstances where distributors are pressed to secure adequate continuous supplies of suitable raw milk. However, that is a matter which the controlling authority must deal with, and from an administrative point of view it would appear to me that the distributor is much more amenable to regulation with regard to transport service than either producers or independent truckers paid by the producers.

In view of the conclusions I have reached on this aspect of the problem, I have not thought it necessary to go into a detailed examination of the cost and profit position of transporters under the existing system. Some study has been made of this aspect by the Commission Accountant, and his report, as stated above, appears as Appendix 17. I only wish to comment on the estimate of return as related to capital employed. From the figures available to Mr. Entwistle, it would appear that the return on capital employed in the transporting of milk may be in excess of 20 per cent. This is a difficult figure to determine because of the absence of replacement vehicles during war years. There may be some question as to the true value of "capital employed", but if the estimate is correct such a return appears to me to be a very generous one and not in keeping with the necessity of holding consumer prices of milk at the lowest possible level. The matter is discussed in some detail in Mr. Entwistle's report. I should also direct attention to Mr. Entwistle's comment on the relatively high percentage of administrative and office salaries to total revenue, as compared with other divisions of the milk industry.

In reaching the conclusions stated, I am not unmindful of the fact that the milk truckers by and large have honestly built up their businesses and have provided vital services to the industry. It may be that they should be given an opportunity to themselves rationalize their methods of delivery before the somewhat drastic changes suggested are undertaken. But irrespective of the methods used, the consuming public should no longer be asked to bear the cost of such an inefficient system in the price to them of a vital food product.

CHAPTER VII

Distribution and the Position of the Distributor

The cost and profit position of the milk distributors as a group was the subject of a most exhaustive enquiry and study by the Accountant furnished me for the work of the Commission. The results of this work, done under the direction and supervision of Mr. John Entwistle, C.P.A., is sufficiently valuable in detail to be set out in full, and I have included it as Appendix 18 of this report. It was not work that was accomplished easily, and indeed it was not completed until early in July of this year, when the final definite draft of this report was made available to me. Fortunately, earlier and more tentative drafts were available by early June.

For the most part the accounting report speaks for itself. It is used here by way of commentary on the general conditions and tendencies disclosed, and in order to compare the results obtained with the other evidence presented during the public enquiry. Where possible, I have endeavoured to correlate the two and to value the report accordingly.

The distributors are, of course, all licensed by the Milk Control Board, and in this particular part of the report I am dealing with them for the most part in their capacity as distributors of fluid milk only. As will be seen, they comprise all sorts of operations both large and small, and the regulations governing them are such that they must be all-inclusive and must apply to all kinds of business. This is also true of the price-fixing agreements which have been entered into between the producers and distributors. These agreements are necessarily governed by the needs of the small operators as well as the larger. In the result this has been to the advantage of the larger operators who have large volume of sales and in many cases handle a variety of dairy products.

Licensing

The Milk Control Act provides that no person shall directly or indirectly engage in or carry on the business of supplying or distributing, transporting, processing or selling milk, unless such person is the holder of a license issued by the Board. The distributors of milk licensed by the Board are divided into three classes, regular distributors, producer distributors and pedlars. Pedlars are a class who habitually obtain their milk from the producer, or more generally from a licensed distributor, and sell it on a route of their own: they do not process the milk and are few in number, and very little consideration need be given them in describing these distributors, as they have little or no effect on general conditions.

In the year 1945 there were 76 licensed pedlars, and in the year 1946 the number was 83. In the year 1943, 624 regular distributors were licensed, and 389 producer-distributors. In the year 1946, the regular distributors numbered 630, and the producer-distributors 346. The Milk Control Board was first set up in the year 1934, and for the years 1934 and 1935, in their records, the type of licenses granted were not differentiated. The total number of licenses issued in 1934 to regular distributors, producer-distributors, pedlars, and milk manufacturers, was 1,335. The same figure for

1935 was 1,624. For the year 1936, when the classes I have indicated were established, 647 licenses were issued to regular distributors, 861 licenses were issued to producer-distributors, and there were 87 pedlars; making a total of 1,595.

It is obvious that there has been, over the ten year period from 1936 to 1946, a somewhat drastic decline in the number of producer-distributors. This, I think has been a natural result of the general improvement in economic conditions, which made it possible for many of these producer-distributors to confine their attention to production or, in some cases, to secure more remunerative employment elsewhere. This was particularly true as the war progressed. As suggested, there has been a tendency for the producer-distributor to revert to the position of producer and to leave the distribution of fluid milk to the regular distributors who, generally speaking, also engage in the distribution of other dairy products.

Position of Distributor in the Industry

The regular distributors are the persons, partnerships and corporations engaged in the processing and distribution of fluid milk at both retail and wholesale.

Apart from the wholesale aspect of the business and the distribution of fluid milk through retail stores, the distributor, in most cases, stands directly between the consumer and the producer, and unless the trucker of milk from the producer to the distributor can be called a middle-man, no other middle-man intervenes.

The average distributor confines himself to the distribution of fluid milk, chocolate milk, butter-milk and fluid cream. Precise figures are not obtainable, but out of the total of 630 distributors licensed in 1946, the number engaging in the sale of creamery butter, ice-cream, and concentrated milk products, does not, I am advised, greatly exceed a hundred. Disregarding the branch operations of the three largest distributors, of which mention will be made below, and of some 35 operators who are more properly classified as creameries, the number is 55. For the fiscal year preceding October 1st, 1946, the total value of all dairy products handled by these 55 distributors amounted to $16,114,722, as against a total sales value for all distributors of approximately $90,000,000, being 18 per cent of the total sales. This amount of business was done by 55 distributors against a total of about 630.

The three largest distributors in the province who also engage in this blended operation in the same period sold products to the value of $35,472,455, making a total, if they are included, of $51,587,177 for the 58 distributors so diversifying their business. The percentage of dollars for over-all sales by the three largest distributors is 39 per cent of the total dollar value of sales for the province. When the 58 distributors are considered the percentage figure is 57 per cent. It thus appears that on a dollar basis those distributors dealing substantially in fluid milk alone constitute only 43 per cent of the total intake from sales, although in number they probably constitute about 572. These figures are given without regard to the producer-distributors who, for the most part, deal only in fluid milk.

When profits are looked at, the results may be expressed as follows:

Profits of all regular distributors	$3,294,000
Profits of 55 distributors being 16 per cent of total	533,397
Profits of 3 largest distributors being 48 per cent of total	1,593,263

Total Profits of 58 distributors ... ... being 64 per cent of total	2,126,660
Total Profits of balance of regular distributors is ..... representing only 36 per cent of the total.	1,167,340

The importance of these figures and percentages will be apparent when the question of price-fixing at the consumer level is discussed. They also illustrate one of the essential requirements of the industry if a profitable operation is to result.

The producer-distributor, on the other hand, generally does limit his operation, and he, of course, fills a very definite need in smaller communities of the province.

The average regular distributor sells his milk, not only at retail and wholesale, but also, in many cases, sells it at wholesale to grocery stores who, in turn, sell milk to the public as one of their regular items in the course of their business.

Since December, when this inquiry actively commenced, the accountants attached to the Commission have been endeavouring to examine the financial position of the distributors, and attention was paid in this examination and investigation to the provisions of Paragraph A of the Order-in-Council, setting up this inquiry, that is, to the distributing and marketing of milk, and to the costs, prices, price-spreads, trade practices, methods of financing, management and grading of those distributing fluid milk.

While there appeared to be, in the year 1946, 984 licenses issued to distributors, our examination disclosed that, in many cases, licenses were issued to various branches and units of the same enterprises, and it may be said for practical purposes, that there are approximately 850 distributors distributing fluid milk to consumers in the Province of Ontario.

The Regular Distributors

Apart from the producer-distributors among the regular distributors, there is the greatest variation in the size and type of business carried on. There are distributors doing business with an annual sales volume as small as $5,000 a year: and at the other end of the scale, among the so-called independents, that is apart from the three largest operators, of whom I will speak later, are firms doing a business in excess of $1,000,000 a year. The Borden Company Limited, which is one of the three large distributors, does the largest business in the province and has an annual sales volume in excess of $13,000,000 a year. Some of these distributors are proprietory concerns owned by an individual, some are partnerships, and many are limited companies. I have indicated above the approximate number who deal only in fluid milk and cream, and even in those cases, I am told, they frequently act as jobbers in the sale of butter and eggs, which they carry as a convenience for their customers. In the year 1945, of necessity the year into the operation of which investigation had to be made, a total of some 432,857,500 quarts of fluid milk were sold in the Province of Ontario, representing a dollar value of $53,284,758.00. In the year 1946 the quantity of fluid milk sold was 467,736,000 quarts, representing a dollar value of $60,488,860. These figures include the consumer subsidy of two cents paid until May 31st, 1946. As the price increased at that time by the extent of the subsidy, they are comparable. Similar figures for the sale of fluid cream, ice-cream, ice-cream mix, chocolate drink, butter, cheese and other products, including eggs, poultry and sausages, are set out in table 14 in Mr. Entwistle's report, Appendix 18.

Developments in Respect of Pricing

Without commenting at this point on the powers of the Milk Control Board to fix prices, the Board, until October, 1946, had from the year 1935 proceeded on the premise that it possessed such a power. As a result the distributors have operated in these years since the establishment of the Board in markets in which prices have been fixed either by order of the Milk Control Board or by agreements with producers, having for the most part Board approval. This result was attained gradually since 1935. The record furnished me by the Milk Control Board is set out in Appendix Number 6. A study of this appendix will show in a general way that during the years 1935 to 1937 there was considerable activity in establishing a price structure across the Province. This stabilized towards the end of 1937 and from then until 1939 there was not much change, but in the years 1941 and 1942 there was again pressure towards high prices across the entire province. As has been remarked before, in 1934 when the Milk Control Act came into operation there was a chaotic and confused situation in the milk markets of the province and a study of the minutes of the early meetings of the Board shows that at that time it was acting generally in the capacity of an investigator and was attempting by pressure on producers and distributors to obtain a more rational organization of the various markets and price agreements.

By 1935, however, when the Act was amended, a number of orders were issued setting prices for the first time. This process went on through the years 1936 and 1937. By 1937 there was a movement towards higher prices in a limited degree and increases amounting to one cent per quart retail price were given in Northern Ontario cities of North Bay, Sault Ste. Marie, Sudbury and a number of smaller points in Southern Ontario. In the Toronto market the price moved up one-half cent a quart and in that summer moved back to the former price of twelve cents and later rose to thirteen cents.

The basis of these price arrangements in the early years of control was what has been called "the recognized price." As far as one can judge from information furnished me this was the price prevailing in the late 1920's before the break owing to the depression of the early 1930's. An example of this can be shown in the following table relative to the Toronto market:

Year		Retail Price Per Quart	Producer Price Per 100
1929	May	$ .1250	$2.36
	September	.1333	2.66
	November	.14	2.81
1930	June	.1250	2.20
	October	.13	2.50
	December	.12	2.20
1931	May	.11	1.85
1932	February	.10	1.45
1933	August	.11	1.81
1935	October	.12	2.10 (By Agreement, approved by Board Order).

The recognized price for Toronto at the time of the negotiations in 1934 and 1935 appears to have been 11 cents per quart. Evidently this recognized price was not satisfactory to producers and the price, reached by agreement, became 12 cents per quart to consumers and $2.10 per 100 pounds to producers.

In the years 1938 to 1939 price stability seems to have been achieved for a short period, although the Toronto markets again reverted to twelve cents and price agreements were reached in a few other markets.

By 1940 a few markets moved upwards by one cent a quart, the only one of any consequence being the City of Ottawa. By 1941 the inflationary pressures which resulted towards the end of that year in the imposition of price control became more apparent. An examination of Appendix 6 shows that there was a substantial upward revision in the year of one cent per quart. It is stated that many markets applied for a second increase in that year, but that the Milk Control Board was unable to obtain the concurrence of the Wartime Prices and Trade Board. At this time the effect of the rapidly rising increase in production costs began to show in fluid milk shortages, and at the end of 1941 producer subsidies were paid by the Federal Government as a wartime measure for the first time. I am also advised that by the end of 1941 practically every milk market, with the exception of very small towns and villages, was operating under prices established by the Milk Control Board administration.

What followed from this point can best be put in the words of a memorandum furnished me by the Chairman of the Milk Control Board:

> "In 1942 the Wartime Prices and Trade Board established price ceilings on milk to consumers—
>
> Southern Ontario, 12 cents
> Northern Ontario, 13 cents
> Principal Markets, Toronto, Hamilton and Niagara Peninsula and Windsor at existing prices of 13, 12½, and 13 cents respectively.
>
> A number of markets in Ontario were selling milk to the consumer at prices lower than the established ceiling prices. A number of these markets were located in close proximity to other markets at the ceiling price and, with the increased demand for milk and shortages in some markets, it was evident we would be required to level prices out and considerable of this was done in 1942.
>
> "A further difficult situation faced the Board as a result of the W.P.T.B. subsidy payment ruling. Under this ruling the subsidy was payable only in markets which were already selling to consumers at the ceiling prices. This resulted in inequalities to producers and accentuated the demand for increases in consumer and producer prices. These circumstances brought a further levelling of prices and by the end of 1942 most of the towns and smaller cities were at the 12 cent ceiling price.
>
> "It will be noted that the producer prices moved upward in 1942. This resulted from an Order, 42-84, of the Milk Control Board, following a ruling from the W.P.T.B., that producer subsidies were payable only on certain minimum prices being paid to producers. Therefore, from September 1, 1942, there was a fairly uniform price structure to producers, that is, in all markets selling at—
>
> 12 cents per quart to consumers—the minimum price to producers was $2.35
> 12½ cents per quart to consumers—the minimum price to producers was $2.50
> 13 cents per quart to consumers—the minimum price to producers was $2.65
> (Exceptions—Toronto Consumer Price 13 cents—producer price $2.50
> —Windsor Consumer Price 13 cents—producer price $2.55).

1943-1946

"The price structure as established in 1942 carried through until September 30, 1946. A few scattered markets, which were not at the ceiling price of 12 cents for Southern Ontario, moved up to the ceiling.

Area Prices

"The first move took place in Kent County and in the Niagara Peninsula in 1936. The move in the Niagara Peninsula was not completed until 1941, when Hamilton and the Niagara Peninsula were placed on a 12½ cent consumer price and a $2.35 producer price. In Eastern Ontario the same price structure became effective in most of the markets in 1941 or subsequently, except the Towns of Picton, Napanee, Morrisburg, Arnprior and Hawkesbury, so that by 1945 area prices were pretty well established as follows:

13 cents—Toronto, Windsor and Northern Ontario
12½ cents—Hamilton and Niagara Peninsula
12 cents—The remainder of the Province, with exceptions as above.

Uniform Prices

"It will be noted in the early days that a consumer price was accompanied by varying producer prices, for example, a 12 cent consumer price was accompanied by a producer price of $2.10 or $2.15 per hundred. The Board, in trying to bring about uniform prices according to consumer prices, decided that the distributor margin should be narrowed and in 1941 a 12 cent consumer price carried with it a $2.25 minimum producer price. Later in 1942 by Board Order 42-84, a 12 cent consumer price carried a $2.35 minimum producer price and a 13 cent consumer price became associated with a $2.65 minimum producer price instead of a $2.45 or $2.50 producer price."

The price structure as it exists at the present time is shown on the map whch has been supplied through the courtesy of the Milk Control Board and it appears following page 106.

Competition in Industry

Very little competition exists between distributors. As a result of the growing stringency of health regulations, including pasteurization and the price fixing agreements in all but the smallest markets of the province, the only way in which distributors can compete is in respect of service to consumers. For all practical purposes the product is standardized, which eliminates competition on a quality basis. Price is fixed and trade practices are uniform. There may be some variation in butter-fat content between distributors, but there is a fixed and ample minimum in this regard. And indeed, if attention is paid to nutritional evidence, this is no longer of great importance from a health viewpoint. The competition remaining is obviously of the most expensive and least necessary nature.

Distributor's Spread in Fluid Milk Sales

As is apparent, the price of fluid milk when consumed as such, is fixed under various price agreements, which up to September 1946 were deemed to have the force of law under the orders of the Milk Control Board. The spread enjoyed by the distributor is measured by the difference between the price he pays the producer and the price he gets for his milk when sold either at wholesale or retail.

The last order of the Milk Control Board fixing prices in the Toronto area, for example, is Order No. 42-2. The price schedule set out in it is as follows:

Re: *Sale of Milk by Distributors*

That milk and milk products shall be sold by distributors at the following prices only:

	RETAIL Customers By Stores in Paper Containers	RETAIL Customers In Glass or Paper Containers	STORES Customers In Paper Containers	STORES Customers Add 5c Deposit per Glass Container	WHOLESALE Customers In Paper Containers	WHOLESALE Customers Add 5c Deposit per Glass Container	3-CAN Customers In Paper Containers	3-CAN Customers Add 5c Deposit per Glass Container
	(½c added)		(½c added)		(½c added)		(½c added)	
STANDARD MILK								
gal..........	....	....	....	....	.44	.42	....	.38
qt..........	.13½	.13	.12	.11½	.11	.10½	.10	.09½
pt..........	.07½	.07	.06¼	.05¾	.06¼	.05¾	....	....
½ pt........	.04½	.04	.03¾	.03¼	.03¾	.03¼	....	....
CHOCOLATE DRINK								
gal..........	....	....	....	....	.52	.50	....	.46
qt..........	.14½	.14	.13	.12½	.13	.12½	.12	.11½
½ pt.......	.05½	.05	.04	.03½	.04	.03½	....	....
SPECIAL MILK								
gal..........	....	....	....	....	.52	.50	....	.46
qt..........	.15	.14½	.14	.13½	.13	.12½	.12	.11½
pt..........	.08½	.08	.07½	.07	.07½	.07	....	....
½ pt........	.05½	.05	.04¼	.03¾	.04¼	.03¾	....	....
IRRADIATED AND HOMOGENIZED								
qt..........	.15½	.15	....	....	.13	.12½	....	....
pt..........	.08½	.08	....	....	.07½	.07	....	....
½ pt........	.05½	.05	....	....	.04¾	.04¼	....	....
VITAMIN D								
qt..........	.14½	.14	.13	.12½	.13	12½	....	....
pt..........	.08½	.08	.07	.06½	.07	.06½	....	....
SKIMMED MILK (not over 1% B.F.)								
gal..........	....	....	....	....	.22	.20	....	.20
qt..........	.08½	.08	.07	.06½	.05½	.05	....	....
BUTTERMILK (not over 1% B.F.)								
gal..........	....	....	....	....	.22	.20	....	.20
qt..........	.08½	.08	.07	.06½	.05½	.05	....	....
½ pt........	....	....	.04	.03½	.04	.03½	....	....
SPECIAL BUTTERMILK								
qt..........	.10½	.10	.09	.08½	.07½	.07	.06½	.06
pt.	.06½	.06	.05½	.05	.05½	.05	....	....
½ pt........	....	....	.04	.03½	.04	.03½	....	....

	RETAIL Customers		STORES Customers		WHOLESALE Customers		3-CAN Customers	
	By Stores in Paper Containers	In Glass or Paper Containers	In Paper Containers	Add 5c Deposit per Glass Container	In Paper Containers	Add 5c Deposit per Glass Container	In Paper Containers	Add 5c Deposit per Glass Container
	(½c added)		(½c added)		(½c added)		(½c added)	
32% CREAM								
gal..........	....	....	...	....	$2.10	$2.08	...	$1.96
qt...........	....	....	...	....	.52½	.52	.49½	.49
pt...........	.35½	.35	...	....	....	....	....	...
½ pt........	.25½	.25	.21½	.21	...	....	....	....
10% CREAM								
gal..........	....	...	....	....	$1.06	$1.04	....	.96
qt...........	....	....	...	...	.26½	.26	.24½	.24
½ pt........	.10½	.10	.09	.08½	....	....	....	....

HOSPITAL MILK—34c per gallon and 8½c per quart in 5c deposit bottles.
9c per quart in paper containers.

SCHOOL MILK—.03c per half-pint.

SCHOOL, CHOCOLATE MILK—.03c per half-pint.

PEDDLERS—The independent drivers or peddlers be billed for all dairy products with the exception of butter at the retail price in accordance with the Toronto Milk Marketing Agreement in effect at the time and that they be given a discount of 33⅓% with no further discount for cash or rebate of any kind given from this price. Where no retail price is specified for "cream" the 3-can price without any discount will apply.

RELIEF MILK—Where a voucher system is in effect and handled directly by the municipality a discount of 10% may be given, but where Relief Milk is on a cash basis, the prices contained in this agreement are in effect.

In September 1946, when the current price agreements were reached between the producers and distributors, it was agreed that when the prevailing price increase went into effect there should be added to the price set forth under Order 42-2, three cents for quarts, two cents for pints and one cent for half-pints, and that these additions should govern the present price structure in the Toronto market.

It is quite obvious that the return to the distributor is directly governed by the extent of his wholesale and retail sales. The determination of this has been a matter of the greatest difficulty. While returns in respect of these are made to the Statistics Branch of the Department of Agriculture, I found that they had not been compiled. Fortunately it has been possible to tabulate a sufficient sample of the 1946 return to give a reasonable indication of the division between wholesale and retail sales in the province. This result would indicate: (See Appendix 19)

Retail or Household Sales	73.93%
Wholesale and Store Sales	26.07%

The records for other years have not been dealt with. Owing to the variety of accounting methods followed by the distributors it is, practically speaking, impossible to establish any ratio from their accounts.

Mr. Entwistle's opinion, prior to the recent price increase, put the average spread between the producer price and the price obtained from the consumers at 5.31 cents. As is pointed out in table 10 of his report, this is for the fiscal year next preceding October 1, 1946, and it is interesting to note that, under the recent price increase, the entire benefit of which did not go to the producers, there is an increase in the spread of at least .36840 cents per quart to the distributor, or for practical purposes .37 of one cent per quart. There is a possibility it is slightly larger than this. This figure, however, can be substantiated in his opinion. This brings the total spread under which the distributor operates at the present time to 5.68 cents per quart.

It is interesting to note that the difficulties arising from the great variation in accounting practice maintained by the distributors, which Mr. Entwistle encountered, is not a new experience. In the preliminary report made from investigations in the year 1922 by Mr. J. B. Hoodless and Mr. H. W. Clarke, at that time with the Department of Agricultural Economics at the Ontario Agricultural College, it was said:

> "Difficulty was encountered owing to the various accounting systems in use and in many cases costs had to be arbitrarily allotted to endeavour to place them uniformly. The figures given are in all cases weighted averages of two or more businesses."

These words could be applied with equal truth to conditions 25 years later in 1947, and underline, if anything, the suggestions that have been made from time to time in this report and which will be developed later, as to the necessity of a more uniform system of accounting on the part of distributors who deal in such a vital product to the public as fluid milk. That this condition is not confined to the distributors in Ontario is evidenced by the following words in the report of the Accountants attached to the Royal Commission investigating milk markets in New Zealand in 1943:

> "The books and records kept by these dairymen generally are inadequate, and it would be of assistance in any future investigations if those engaged would adopt a uniform method of bookkeeping."

Cost of Processing and Distributing a Quart of Milk

During the course of the inquiry various distributors attempted to work out, insofar as they were concerned, the cost of processing and distributing a quart of fluid milk. They, like the Accountants advising the Commission, had to arbitrarily allot costs to the fluid milk distribution end of their business. This was particularly true in the case of those distributors who sold other and more profitable lines of dairy products than fluid milk. In an industry composed of as many small units as is found in the distribution of fluid milk in the province, there is great variation in profits resulting after costs have been covered.

Taking the province as a whole, attention may be directed to table 10 in Mr. Entwistle's study in Appendix 18 where, for the whole province, a net profit per quart is shown to the distributor of .21 or roughly one-fifth of a cent. Attention should also be paid to the fact that, in Mr. Entwistle's opinion, the recent price increase benefited the distributors by as much as .37 cents per quart and that, therefore, the present profit of the distributor is increased, subject to losses from lesser volume, to the vicinity of .58 cents per quart. It must be remembered, of course, that this is an average figure taken over the whole province.

Most of the distributors who gave evidence before me showed a profit closer to one-third than one-half cent per quart, although some were larger. Taking the Toronto market again as an example, there was filed before me a study of the average costs and profits of some 27 dairies in the Toronto market which, it was said, distributed roughly one-half of the fluid milk in the city. It appeared on cross-examination that these 27 dairies by no means constituted the most efficient half of the distributors in Toronto. The statement of their costs, as submitted to me, is as follows:

Sales	100.000%
Sundry Income—Bond Interest Received—Profit on Butter and Egg Sales and Hauling Income	.820
Merchandise Cost—Milk and Cream	54.995
Processing and Bottling Costs:	
Wages	5.844
Expenses	6.198
Depreciation	1.444
	13.486
Delivery Costs:	
Wages	17.147
Expenses	7.028
Depreciation	.551
	24.726
Administrative Costs:	
Wages—Office, Management, Sales Manager	3.185
Expenses	2.681
Depreciation	.038
	5.904
Sales	100.000
Sundry Income	.820
	100.820
Merchandise Cost	54.996
Processing and Bottling Costs	13.486
Delivery Costs	24.726
Administrative Cost	5.904
Total Cost	99.112
Net Profit	1.708
	100.820
Income Tax Based on Corporation Tax Rates	.893
Net Profit after Income Taxes	.815

I do not think I need set out the other efforts along this line which were made in other parts of the country, notably in Windsor, Ottawa and Northern Ontario areas. It is sufficient, I think, to say that in no case have distributors kept their records in such a way as would enable them to state with complete accuracy what the costs relating to the distribution of a quart of fluid milk are. Under the present accounting practices of the distributors, these calculations necessarily involve an arbitrary allocation of costs to the fluid milk part of the distributor's business. They also involve equally arbitrary allocation of charges for depreciation and obsolescence. It is a problem about which no one can speak dogmatically. It is always an arguable question when one attempts to disintegrate a blended operation, to say how much of the administration expenses and how much of the charges for depreciation and obsolescence should be allotted to the sale of fluid milk. Nevertheless, within certain limits one can speak with fair certainty and, in my opinion, it has not been demonstrated, either by the Accountants carrying on investigations for the Commission or by any distributors giving evidence before me, or by the consumer or producer groups, that the profit on the sale of a quart of milk exceeds one cent per quart. In my view it has been established by the evidence that the profit per quart is a fraction of a cent. It is probably closer to one-half cent than to any other fraction at the present time.

Necessity of Decreasing Costs and Narrowing Spread

It may be that, because of the profit resulting from a blended operation, and because of the strong position built up by large volume of business, certain of the more substantial distributors, including the three larger distributors and many of the more substantial independent distributors, would presently sell their milk at prices less than those presently prevailing. If the concept of a fixed price to consumers of fluid milk, which has obtained under the Milk Control Board, is to be continued, then obviously a price must be set which is sufficient to cover the cost within reason of all licensed distributors. A very valuable incentive towards further narrowing of the spread and further decreasing the cost of distribution is entirely removed from the industry when the consumer price is fixed. If some effective competition as to price were allowed to operate in the industry, I am satisfied that means would speedily be found by the more efficient distributors to further reduce the cost of supplying fluid milk to the consuming public. The fixed price has tended to maintain a status quo in the industry which, it seems to me, is a very unhappy one from the consumer viewpoint. One might assume that the bonus which results from the fixed consumer price to the larger and more efficient distributor, might have led them to try to increase their profits by making cost reductions. The evidence before me, however, did not bear this out.

As appears in my review of the administration of the Milk Control Board, suggestions have been made to cheapen the processing and distributing of milk since 1934. No significant measures appear to have been taken until the years 1941 and 1942, when certain improvements, reducing the cost, were brought into effect by the industry itself under the combined pressure of the Milk Control Board and the Wartime Prices and Trade Board. It is true that practically all the distributors who appeared before me stated that they continually tried to improve the efficiency of their operation and that they were continually on the lookout for better and cheaper methods of distributing their products. But, apart from these very general statements, it was almost impossible to obtain any concrete examples of what was meant by this evidence apart from the changes already alluded to in 1941-1942. It is obvious, I think, that there must be a sharper spur behind the industry if it is to achieve more effective and cheaper methods of distributing milk than those which exist at the present time. There seems to be an assumption by the industry generally that cost plus a fair profit results in a fair and reasonable price. I do not believe that any greater fallacy has arisen in the conduct of private business. If the privately owned agencies distributing milk are to justify their existence, they must continually seek to work out methods of cheapening their processing and delivery costs and of passing on a fair measure of the savings thus obtained to the consumer. Indeed, if I am right in my assumption that cheap milk results in large volume consumption of milk, it is most essential in the distributors' interest that they should do this to a greater degree than they have in the past.

Methods of Decreasing Cost and Narrowing the Spread

It must be apparent to anyone who has followed the course of the inquiry before me, that the general attitude of the distributors in respect to lessening cost was that all that could be done was being done, and that if all was not perfect in the best of all worlds, nevertheless all that could be reasonably undertaken was being undertaken.

In fairness to the distributor I think it must be said that it is not possible to reduce the cost of distribution further without much more active co-operation on the part of the consuming public. There is, I think, no substantial evidence before me which would indicate that the cost of processing and administration are unreasonable or can be greatly reduced.

In connection with the general question of spread-narrowing, it is commonly believed that distributive spreads should be distinctly narrower in the smaller than in the larger markets. During the course of the investigation it appeared to be a common belief that costs of administration and distribution should be lower in the smaller markets than in the larger. Such, however, would not seem to be the case. The general purport of the evidence I heard was to the effect that, while processing costs were lower in the larger urban markets, costs of delivery were, on the whole, higher. In the smaller markets this process seems to be reversed and, while delivery costs are on the whole smaller, processing costs, owing to lesser volume, from the examples which I examined, generally seem to be higher. This, of course, is a general tendency and not an absolute rule. In the larger urban markets all costs do tend to be somewhat higher if only because of the higher wage rates prevailing. It is, of course, entirely probable that, with the passage of time, new and more effective methods of processing will be discovered and doubtless these will be used in the first instance by the more efficient operators and finally by most of the industry. The key at the present time to any immediate further economies must lie in some fundamental re-organization of the distributing process. Without such re-organization possible savings would be comparatively minor in nature and amount. It is interesting to note that, in the study made twenty-five years ago by Messrs. Hoodless and Clarke, the same conclusion was reached. They stated:

> "The most careful study of the conditions of city milk supply as outlined above indicated that measures for such improvement of the business as will give, on the one hand a lower price to the consumer and on the other hand a more attractive price to the producer, do not consist in an attack on, or a lowering of, the distributors net profit. This item in the cost of

> distribution is the smallest item. It now yields no more than a reasonable remuneration on the property used in the service, and being the smallest item in the distributing cost it offers less opportunity for tangible reduction in the costs of distribution.
>
> "To effect tangible reductions in these costs requires the closest co-operation between the three interests affected, the consumers, the producers and the distributors. The consumers have considerable responsibility in that their co-operation with the distributors is necessary to reduce the costs due to demands for unreasonable service and to their loose regard of the property of the distributors. The co-operation of the producers with the distributors is necessary in the cutting down of costs due to unevenness of volume and quality of supply of the raw product. The distributor, in addition to the above divided responsibilities has responsibilities inherent in his business which he alone can discharge, particularly those associated with the most destructive phases of keen competition."

While in Mr. Entwistle's study the cost of bringing milk from the dairy to the door of the consumer's residence is set at 2.65 cents out of the total cost of 12.10 cents per quart, it must be remembered that this is an average figure. Roughly speaking for a large part of the industry, I think it can be said with some confidence that the cost of delivering milk from the dairy to the consumer is closer to 25 per cent of the total price charged.

I was much impressed with a communication received during the course of the inquiry from a gentleman who has spent his life in the distribution of fluid milk and who at one time was the head of one of the largest distributors in the Toronto market. I quote from his letter as follows:

> "I am confident you will discover that the excessive cost of milk is entirely in the duplication of deliveries. All milk delivered in Toronto has to meet the regulations of the Health Department. Therefore, customers are assured the same quality as they now receive.
>
> "Our sixty-five wagons had to travel a long way to reach their zone before making deliveries and then their customers were scattered over many streets. Similar conditions existed with other dairies which resembled a game of checkers moving about to supply different houses. If our entire patronage was in one area, only a few wagons would have been necessary.
>
> "Here is my suggestion that would save at least three cents per quart.
>
> "Have a central dairy plant where all the milk would be received and bottled, load large trailer vans similar to the largest furniture moving vans, these trailers to be delivered to different points or stations where the deliveries will commence. Then a crew of three men would take over and hitch on to the load and begin deliveries.
>
> "Two trailers would be used for each station, one of these would be loaded with empties and picked up for return to the dairy when the loaded one arrives each day. This van would move up a street like a motor car on an assembly line, one man on each side of the street and a driver.
>
> "With a big reduction in price the customer would be willing to co-operate by taking delivery on the front door step. There would be no calling back for collection. For a convenience, tickets could be obtained from the corner stores same as postage stamps. The merchant would welcome this because other sales would be made. A doorstep without an empty bottle and ticket would indicate no milk was required, yet a

> customer could always secure the same milk at the store on the street, if she missed the delivery van.
>
> "This system is similar to the garbage collection whereby a large truck moves slowly up the street and picks up only the cans that are left in the proper convenient place for the men to reach. If no can is left out, then the housekeeper has to wait for the next pick up.
>
> "People are easily educated to new systems especially when reductions are obtainable. Take for instance the cafeteria, the line up for busses, the specified hours for shopping, the ready car fare, etc., etc.
>
> "Consider the saving of taxes, buildings, and equipment contained in the many dairy plants throughout the city. All this could be absorbed in a central plant. These suggestions, of course, apply only to a municipal system."

It must, however, be remembered that, if any changes are to be made in the distributing system, such as zoning, co-operative delivery by one or more distributors, sales through depots, quantity discounts, etc., such changes can only be introduced by the distributors with the full co-operation of consumers.

It is quite apparent, as previously observed, that the product itself is almost a uniformly standard one. The consuming public, however, do not appreciate this and many consumer witnesses before the investigation, when asked if they would be willing to accept any milk offered for sale in their particular market without freedom of choice, stated that they would not. Such would inevitably be the result of a zoned delivery system which would allot certain areas on some equitable basis to each of the distributors. It can only be said that if the consumer is not willing to co-operate in effecting economies of this sort, he should be prepared to pay the extra costs involved without complaining about them.

At the present time, as already observed, any competition which exists in the industry is one of service, based on the sales ability and personality of the milk salesmen. This is unquestionably a very expensive form of competition. As I have said, if the consuming public demand it they must expect to pay for it. It is a form of competition, however, in which it is very hard to detect any social value or any economic value except to the salesman himself. It is most desirable to have the consuming public realize that substantially they are purchasing a standard product and there is little, if any, real difference between the milk sold by the various distributors.

Depot Deliveries

In 1937 it was stated in a treatise on the subject:

> "A really radical reduction of distributive activities would result if consumers should become willing to take delivery at a store rather than at the doorstep. Such a move would involve nothing less than the disappearance of milk distributors as a special class and at the moment is unthinkable."

My observation would be that, insofar as the wishes of the consuming public are concerned at the present time, it is still equally unthinkable.

It may be, of course, that there are very substantial objections to depot deliveries as a universal policy. Under that system the consumers would, in effect, be making their own milk deliveries, while the present methods of processing and bottling would continue. The function of the dairy would end when milk was delivered for sale to the store or milk depot. It would cut the present high cost of milk salesmen but the social dislocation and unemployment resulting from such a process would create another social cost which in the long run might well equal the saving. Moreover it must be remembered that the individual consumer would incur some cost in going to the depot or store. Such a method, while not universal, has been used in some of the larger United States cities and this fact has frequently been cited as evidence that the people are willing to adopt such a system if it is provided for them. It is also said that as a practical measure many consumers, especially mothers of large families, would be unable to obtain milk in this way and for many persons it would constitute a real hardship. It would undoubtedly require the institution of larger refrigeration units both in stores and in the new depots which would have to be built, and it would involve a complete loss on the present delivery equipment and the expenditure of substantial sums of money by the distributors for the erection of distributing depots.

It is almost impossible in advance to calculate the loss and gain of such a system. It can only be said that no experimentation in Ontario along these lines has been conducted by the distributors to any extent, and it may be that some cautious investigation along these lines would repay the efforts.

In this connection it should be remembered that, while the figure of 26.07 per cent of wholesale sale as against the total volume is a provincial average, it affects comparatively few of the distributors in number. As Mr. Entwistle points out, at least one distributor is exclusively in the wholesale business, and a representative cross-section of successful independent operators shows an average of 44 per cent wholesale trade. It was argued before me for the distributors that the loss of profit resulting from larger depot or store sales at discounts below the retail price to consumers would necessarily render it essential to charge more for house deliveries because of the reduction of retail sales to householders by the distributors, and that this practice would be unfair to those householders unable to take advantage of depot sales. It is noteworthy that those distributors now engaging in a substantial wholesale business have not as yet found this step necessary and are able, even with high percentages of such sales, to still show substantial profits. From Mr. Entwistle's conclusions, the new price increase has made this even more possible. In view of this it is difficult to resist the conclusion that the ultimate consumer should now have some discount for depot or store purchases or purchases in bulk. In effect, by this method some of the advantages of the recent price increase would then be passed on to the ultimate consumer.

Every Other Day Delivery

Delivery costs can also be reduced by adopting less frequent delivery, such as every other day delivery, or five day or six day delivery. These would unquestionably result in some saving on equipment and manpower, and in many markets, notably in the United States, one or the other of these methods have worked with a fair measure of success. Whether the greater lack of household refrigeration in Ontario, as compared with parts of the United States, would be a bar to such a system in Ontario cities, especially in the summer months, is a practical question that should be considered. The objections, apart from refrigeration, are all technical in nature. It is said that the necessity of keeping milk for a longer time before using it might have adverse effects on its quality and might lead to disease. New costs would be created in that distributors would have to maintain a somewhat larger supply of bottles. The present transportation facilities for use on alternate days would probably be sufficient.

Co-operative Delivery by Distributors

A third plan suggested would not change the essential nature of the work to be done, but would eliminate duplication in the doing of it. This would involve the creation of a distributing agency for the various dairies and would result, if properly done, in a completely rationalized system of delivery. Such an agency could either be municipally-owned and operated or owned by the distributors co-operatively. In effect, this is one of the results of the municipal dairy at Wellington, New Zealand. It has been stated by some authorities that the savings from such a system might result in one and one-half to two or one-quarter cents a quart, depending on the size of the market. In effect, it would call for collective selling and delivery. In respect of the benefits obtained from such a system it is worth noting that in the majority report of the Royal Commission in New Zealand in the year 1943, it was stated that the Wellington Municipal Milk Department distributed milk in that municipality at least one penny per quart cheaper than the other privately-owned companies whose cost of distribution were investigated.

Zoning

Another plan which has been suggested would be that of zoning, which I have mentioned earlier. This, of course, would completely eliminate overlapping in deliveries and competition in selling. The result would be unquestionably a sizeable reduction in delivery mileage and delivery time and therefore delivery expenses. The distributors on the whole objected to such a suggestion when it was put to them on the ground that it did not permit them to choose their own customers or their customers to choose them. They also objected because the plan tended to eliminate the opportunity of securing volume from new business. The plan was apparently tried with success in Melbourne, Australia, in 1938 and has, I understand, operated there since that time.

In respect of suggestions made to eliminate duplication of delivery, it should be noted that the extent of this duplication varies very considerably, depending on the size of the market and also on the scale of operation of the distributor. In many of the smaller markets where the number of distributors is small and where distances are relatively short, the possibilities of duplication are obviously much less than in large urban markets where distributors are numerous. In such urban centres the smaller distributors may have to travel considerable distances in delivering their loads. On the other hand, the large scale operators in these centres have a much greater density of delivery, which assists in reducing their costs. In other words, distance between calls in their case is much less than in that of the small concerns.

Quantity Discounts

The general attitude of the distributor was to oppose quantity discounts to householders. It was stated that householders would co-operate by buying large quantities to obtain reduced prices, and the distributor regarded this practice with disfavour. It was also stated that there were grave difficulties in working out a workable system through the men distributing milk for handling these reduced charges, and generally it was not treated seriously.

I do not think, however, that any of the witnesses for the distributors were able to deny that it was cheaper to handle a large quantity of milk to one point than the same quantity to several different points, and in view of the remarks at the conclusion of the paragraph relating to depot sales, it would seem to me that some discount for quantity purchases should be seriously considered by the distributors. After all, in principle it is identical with the giving of discounts for wholesale purchases, which is a regularly established practice and already constitutes more than 25 per cent of the total milk distribution in the province.

Trade Reaction

The reaction of both the distributors and the consumers to most of these suggestions was a simple attitude that it could not be done. I do not believe this attitude is a tenable one. I think in many cases more could be done, but unquestionably some effective pressure from outside the industry is necessary to bring it about. This pressure could be in the form of a more aggressive policy on the part of the Milk Control Board, or preferably by the creation of real and effective competition within the industry itself. Unquestionably the existence of this high distribution cost and the apparent economic waste incurred is one of the strongest grounds on which public ownership and control of the distribution of fluid milk is urged. I propose to discuss this problem later but it would appear that milk is such a vital product that the public are entitled to obtain it in the cheapest possible manner. It must be remembered, however, that a price is paid for all efforts of this sort and it may well be that what is gained on one hand is lost on the other.

It was stated in Chapter 2 of this report that there are approximately 20,000 persons engaged in processing and transporting milk and milk products. A large proportion of this number is engaged in distributing milk in small municipalities, and if as a result of economies they are to be deprived of their occupations as such, the cost of this re-allocation and re-shifting of a large group must be taken into account. It is entirely desirable that those distributing milk should be well and adequately paid for the work they do, and if they can be readily absorbed in other lines of endeavour there is not the same objection to sudden and drastic changes in methods of distribution which would otherwise arise. Possibly the key to the problem from the viewpoint of the distributor lies in the realization of the fact that essentially he is operating a public utility. This fact involves him in an obligation to be more adventurous in discovering methods of better serving the public at cheaper prices. In my view, if some definite efforts along these lines are not instituted and not pressed with more vigour than in the past, the logical alternative will be the setting up of publicly-owned utilities to carry on the functions now performed by the present distributors; and public opinion may well force this whether the results justify the change or not.

The Financial Position of the Distributors Generally

The general financial condition of the distributors, on an over-all basis, is fully discussed in Mr. Entwistle's report in Appendix 18, and I see no great advantage in repeating what he has said. Nevertheless, there are certain conclusions that he has reached that are worthy of comment. It is worthy of note that, as compared with 1944, the proportion of milk used for fluid consumption, as compared with total production, has increased from about 26 per cent to an estimated percentage of 27.67 per cent. If one relates this to the discussion earlier in this report dealing with the producer's surplus milk problem, it will be seen that the process there indicated has taken place. The tendency for new producers to enter the fluid milk field because of better prices obtaining, has not yet exhausted itself.

Looking at the over-all examination based on the financial statements of a substantial number of independent distributors, which is set out in Exhibit B to Mr. Entwistle's report in Appendix 18, it is interesting to note that on an average the total percentage of profit as against sales amounts to only 3.02 per cent and that the percentage of profit against capital employed is 17.57 per cent before taxes. When a closer examination was made by means of questionnaires, it was noted that the profit percentage of sales is lower in the larger markets and the higher percentages are shown in Eastern Ontario, Northern Ontario and the Niagara Peninsula.

This, of course, is without reference to the earnings of the three large distributors, which in one sense dominate the industry in Ontario. As Mr. Entwistle points out, if their earnings were taken into account the percentages would be higher. The point which I wish to develop shortly is that in the distribution end of the dairy industry one of the necessary conditions to the creation of high profit is large volume distribution. It is worth noting that the percentage as against sales of the combined average of the three larger concerns is 4.49 per cent. These reflect profit not only on the distribution of fluid milk but on what I have called the combined operation on the distribution of all products handled. The fact that their net profits when considered as a percentage of sales are almost 50 per cent higher than the others, also indicate another condition of the business, that is that if large profits are to be made other lines such as ice-cream and chocolate drink should be handled. The three larger distributors are so organized. Not all the independent distributors are.

Capital Employed

The question of what capital is employed is one which is fundamental in relating profits to the capital structure and considerable divergence of opinion was expressed before me as to what constitutes this.

Mr. Entwistle, in his study, in dealing with the independent concerns, used the methods indicated by the Dominion Income and Excess Profits Tax Acts. When these were applied to the three larger distributors a somewhat curious situation revealed itself. In one sense a discussion of this point is academic because it has not been demonstarted before me that in any of the price agreements fixing the price of milk and other products to the consuming public the capital employed has played any large part in determining prices reached. The problem has apparently been generally approached from another angle, that of cost. However, it cannot, I think, be denied that the capital position of the distributor is always a matter which must, in some degree, be in the background in any discussion of price. It is a favourite device on the part of those attempting to show that the distribution end of the milk industry is a monopoly to point to the large capital structures built up by the various corporations engaged in a large way in that business. It would, however, seem to be beyond the scope of this Commission, from a practical viewpoint, to determine the extent of capital inflation in the industry unless it can be shown that it directly and significantly relates to the costs charged the consuming public for milk. It cannot, I think, be said that any such cause and effect were demonstrated before me and I do not think any useful purpose is served by going into what might be called the inflated capital position of the industry as it exists beyond what has been done by Mr. Entwistle in his study. That there are firms in the industry in which such a condition exists is probably true, and the financing which led to this condition may be generally attributed to what are called the boom years before the depression of the 1930's.

In the report of the parliamentary committees investigating the milk industry in Canada in 1932 it was said:

> "We desire to draw attention to a few of the more outstanding facts as disclosed by the evidence in respect to capitalization, depreciation charges, etc., of those engaged in the sale and distribution of whole milk products.
>
> "1. Capitalization.—Over a period of years there is a marked growth in the capitalization of those companies which have been engaged in the business for any considerable length of time. While much of this increased capital was added in the ordinary way, because of increased business, it is very apparent that over-capitalization exists. Some of the ways in which this has been brought about are—
>
> "(a) By purchasing or absorbing, by merger or consolidation of other companies in the same line of business. These changes of ownership very frequently took place at an enhanced valuation which generally involved an increased stock issue by the purchasing or parent company.
>
> "(b) Goodwill.—Very substantial values were in many cases placed upon goodwill. For such goodwill the purchasing or parent company as a general rule issued common stock. No par value stock was used for this purpose in the majority of cases. This stock while nominally of no value, gradually appreciated in value as time went on, became dividend bearing and a charge upon the industry.
>
> "(c) By 'splitting' shares.—The too-common practice of splitting or dividing shares seems to have been indulged in by many of the companies at one time or another during their history.
>
> "2. Depreciation.—There is a very marked difference in the method of calculating depreciation on buildings, machinery and equipment. The Committee is of the opinion that depreciation reserves set up by many of the distributing companies, were calculated on an unwarrantedly high basis, and that frequently depreciation reserves cover hidden profits.
>
> "3. Bad Debts.—To a lesser extent the remarks in the preceding paragraph might well apply to reserves for bad debts.
>
> "4. Salaries.—Committee are of the opinion that salaries paid to some of the higher officials of the various distributing companies are at this time, entirely too high and wholly unjustifiable.
>
> "5. Profits and Dividends.—Those engaged in the sale and distribution of whole milk products have during these very difficult times, in a substantial way at least, been able, unlike most other industries, to maintain their profits at the same level as in more prosperous times. It is true that in certain cases dividends have been reduced and in some cases discontinued. In the most of such companies however, substantial reserves continue to be set aside annually as in previous years. The Committee is of the opinion that dividends might very well have been declared by some companies in which producer-shareholders are interested. The failure to pay dividends in such cases has undoubtedly had the effect of reducing the value of the stock in the public mind and possibly cause dissatisfied producer-shareholders to sell or dispose of their stock at less than actual value.
>
> "6. Merger, Purchase or Absorption of other Companies or Interests.—The evidence presented to the Committee clearly indicates that the sale and distribution of whole milk products is gradually getting into the hands

> of fewer and larger companies. Economies to the companies interested may have resulted, but there is no evidence of any benefits accruing from such mergers to either the producer or the consumer. In many cases there is evidence that mergers have removed competition and the general effect is undoubtedly to give the distributors a more definite control of the situation."

It may be that as a result of this investigation in 1932 some of the larger distributors proceeded to squeeze what might be called the water out of their capital structure. This, I think, explains the observations on page 86 of Appendix 18, wherein Mr. Entwistle points out that by the device of issuing common stock to vendors of dairies, some of the larger concerns did, in fact, at the time such sales took place, because of the high market value of their securities, give a bonus for good-will, which Mr. Entwistle puts in the aggregate at $20,305,360. Apparently only a very small portion of this is represented in the capital structure of the companies concerned today, and there is nothing to indicate that it is now playing a part in determining the cost of milk to the consumer . Insofar as the companies themselves are concerned, it would seem to have been a very good practice. They, in effect, were asking the vendors of the dairies sold to them to venture with them in the future prospects of the combined business. The securities issued in treasury stock did not create fixed charges on the industry which might have affected the price of milk. If any returns were to be obtained from such securities they had to be earned as profits by the companies and disbursed as dividends, otherwise there was no liability to pay. The willingness, however, of the vendors of various properties to participate in this way again accentuates the fundamental condition I have mentioned, namely, that if profits of any considerable scale are to be earned by the distributors it must be by means of a large volume distribution. In one sense I presume this may be called a monopolistic tendency inherent in the industry, and these tendencies will be discussed in some detail later. Apart from that, however, it cannot be said to be anything more than a recognition of the fact that a successful operation in the distribution end of the industry, if large profits are to be accumulated, must be a large scale one insofar as volume of distribution is concerned.

This is further borne out by the study made by Mr. Entwistle of 390 distributing businesses, two hundred and sixty-two of which were small enterprises having an annual sales volume not exceeding $100,000. In fact, the average annual sales of this group was only $40,313. The combined sales total of this smaller group represented 23.06 per cent of all sales made by the distributors studied, while profit contributions of the same enterprises represented only 19.89 per cent. The facts on which these conclusions are based are set out in Appendix "C" of Mr. Entwistle's report, and it is worthy of note that the profits of the distributors having annual sales in excess of $100,000 show a tendency to increase as sales volume expands. This is true of all three groups. This would further substantiate the suggestion that when large volume distribution is obtained, increased profit margins may be expected to bear some fairly constant relationship to sales expansion. Prior to this point, however, the distributor is in the position where he has to expand his plant in anticipation of further business before he gets it so that overhead cuts into his profits to the extent already indicated in the case of the first group of distributors studied who have smaller volume.

Wage and Labour Costs

When wage and labour costs are examined in Mr. Entwistle's report, the importance of large volume is further emphasized. During the years 1939 to 1945-46 the sales of fluid milk in the group of distributors studied showed an increase of 109.18 per cent. This is higher than the provincial average for the same period, which is 87 per cent. During the same period average weekly wage rates increased by 35.01 per cent in the processing end of the industry, 39.73 per cent in the selling and delivery part of the industry, and 29.90 per cent in the administrative section. The over-all average increase was 35.15 per cent. This increase of wage rates is a most important element in the total cost of distribution. Selling and delivery wages alone represent approximately 65 per cent of the total selling and delivery expenses. It is significant, however, that when the labour cost per quart is worked out as between 1939 and 1945-46, the increased labour cost per quart advanced from 3.1899 cents per quart in 1939 to only 3.2815 cents per quart in 1945-46, an increase of .0916 cents per quart or a percentage increase of only 2.87 per cent.

It is important when considering this to remember also that in payroll disbursements there is an actual dollar value increase of 112.10 per cent in 1945-46 as compared with 1939, that the actual increase for selling and delivery costs is 112.36 per cent, and the increase of personnel 52.36 per cent. Large volume sales are undoubtedly responsible for the fact that the industry has been able to absorb these increased costs.

Something, however, must also be allowed for in the general increase of efficiency and the wartime economy measures undertaken by the distributors in 1942. To put it another way, it would appear that if consumption can be increased and maintained at high levels it is possible to absorb a very substantial wage and labour cost increase so long as increased volume of consumption is maintained. On the other hand, the ability to maintain this position must become increasingly difficult as the volume of sales declines.

Combined operations

At this point attention may be directed to the effect on profits of what I have called a combined operation, that is, an operation involving the sale of fluid milk, ice-cream, cream, chocolate drink, butter-milk and cottage cheese, and sometimes butter, etc. In this regard reference may be made to page 101 of Mr. Entwistle's report in Appendix 18.

The 58 distributors engaged in the combined operations do a very substantial portion of the business in the Province, and account for sales of $51,587,177 out of a total sales of $90,000,000, being 57 per cent of the total sales of all distributors. Of this the three large distributors account for 39 per cent and 55 independents 18 per cent. The profit position of these companies accounts for 64 per cent of the total profits of the industry. As against sales their profits are 4.12 per cent of their sales, which is considerably above the general average. It is important to remember this when the discussion of milk as a public utility is under consideration. I question very much whether there would be any substantial prospect of large profits from public utilities restricting their operations to the sale of fluid milk alone. If profits are to be made it would appear that such public utilities would have to engage in the related and ancillary operations carried on by the 58 distributors I have mentioned. This would be their only hope of building up a profit position sufficient to justify reduced charges to the consuming public for fluid milk.

Subsidies

As a war measure and as part of the general price control policy, the Dominion Government paid a consumer subsidy of two cents per quart effective December 16, 1942. This was continued until May 31st, 1946. The total amount paid during this period was, I am advised, $29,649,963.97, or and average of $8,471,418 per annum. The effect of this is discussed at Page 101 of Mr. Entwistle's report in Appendix 18.

Subsidy payments began at a time following the achievement of very substantial economies in the operation of the industry. These were effected by the distributors themselves under pressure from the Wartime Prices and Trade Board and the Milk Control Board. At this point it may be worth repeating what is set out in the earlier part of this report which deals with the work of the Milk Control Board. The following table shows the changes which were made and the times they were effected:

July 1st, 1941—
  Special Deliveries Eliminated.
February 1st, 1942—
  (a) Cream sales limited to 2 grades.
  (b) Cream Containers limited to 2 sizes.
  (c) Store returns eliminated.
  (d) Delivery service limited to one per day and to regular wholesale accounts.
  (e) Special bottle caps eliminated.
July 3rd, 1942—
  (a) Charge on bottle made universal.
  (b) Retail sales established on a cash basis.
  (c) Wholesale credit sales reduced.

If the figures for fluid milk consumption are examined, it is found that in 1941 there was a total sale of 290,089,000 quarts. In 1942 the corresponding figure was 324,949,000 quarts. By 1943 it had increased to 386,645,000 quarts, and by 1946 the all-high total of 467,736,000 quarts was reached. It is interesting to compare these figures with the over-all profits before taxes of the distributors. The following table does not include the figures relating to the three large distributors:

Statement of estimated overall net profits (before taxes) for the years 1939 to 1946 inclusive

Year	% of Sales	Amount	Increase over preceding year	% of increase	% of 1939
1939.........	2.40	$683,938		....	100.00
1940.........	2.45	768,005	$84,067	12.29	112.29
1941.........	2.00	786,528	18,523	2.41	115.00
1942.........	1.60	693,057	(93,471)	(11.88)	101.33
1943.........	2.65	1,283,808	590,751	85.24	187.71
1944.........	2.95	1,572,060	288,252	22.45	229.85
1945.........	3.02	1,661,000	88,940	5.66	242.86
1946.........	2.70	1,654,275	6,725	.40	241.87
TOTAL.........		$9,102,671			
AVERAGE..	2.53	$1,137,834			

(Note: Figures in brackets represent decrease.)

The above table relates to the independent distributors only.

I am advised that the three large distributors show a proportionate increase not in strict proportion to the independents, but nevertheless of a substantial nature.

It is impossible, I think, to say which of the factors I have mentioned, that is, the economies effected in the distribution end of the industry, the consumer subsidy or the large increase in volume of sales to consumers, was responsible for the large increase in profits to the distributors as between 1942 and 1943, a process which continued down to 1946, but I think it is fair to say that the combined operation of these factors produced the improved profit condition indicated. It would, in my view, and in this I am confirmed by the Accountant, be impossible to now unscramble the omelette and to value each of these factors in any accurate way. The lowering of consumer price and the improved purchasing power of the average consumer during these years doubtless also played a part. Of these it is difficult to avoid the conclusion, however, that the most substantial influence on the increase in volume of consumption was exerted by the lower price. It is quite true that the improved purchasing power of a large part of the population during the war years must also be recognized.

Other General Considerations

From the financial studies it is quite apparent that the increased volume of sales over the war years, combined with the consumer subsidy and operating economies, placed the industry in what may be described as a very healthy condition. As evidenced from Mr. Entwistle's report, very substantial amounts have been set aside by the industry on the average to meet depreciation on plant and equipment which was used to full capacity through the war years. It can be said also that at the present time the industry is in a position where it is fully equipped to process fluid milk in sufficient quantities to ensure adequate supplies to the consumers at the present or higher levels of consumption. It is a fact that the present plants of the distributors are geared to an output almost twice that of 1939 and the maintenance of this large volume consumption must be one of the most serious concerns of the distributors. It is quite apparent, I think, that any substantial or continued reduction in volume would substantially increase the distributor's costs. One cannot study Mr. Entwistle's report without realizing that the percentage of profit in relation to sales is a small one. The distributor of fluid milk works on a very narrow margin. This is simply another way of saying that as the profit on each unit sold is a fraction of a cent there must be a large volume of such units to create any considerable profit.

It also, of course, emphasizes one of the great dangers of the industry, that is that if the small profit position is not maintained large and ruinous losses might speedily occur.

The determination of the price charged the consumer therefore becomes a question of considerable nicety and one which may very well mean the difference between a profit and a substantial loss. This raises the general problem of a fixed price to the consumer in any given market.

Tendencies to Monopoly

Many of the consumer representatives appearing before the Commission suggested that the distribution of fluid milk was in the hands of a monoply and in making this suggestion they pointed to the three larger companies operating in the Province. In view of the number of licensed distributors, which is in excess of 850, this is hardly a tenable view. However, it is unquestionably true that in volume and dollar value a substantial part of the dairy business in Ontario lies in the hands of three corporations, namely, The Borden Company Ltd., Silverwoods Dairy Ltd., and Dominion Dairies Ltd., (comprising the Acme and Producer Companies in Ontario). For the purposes of convenient reference these may be referred to as "The Big Three." For the year 1945 these three companies marketed 30% of the total dollar value of all fluid milk marketed in the Province. The proportion of cream and chocolate drink which they marketed also approximated 30% of the total dollar value of the sales of each product within the Province, while as regards butter and ice-cream it would appear that the combined sales of the three concerns was substantially more than 30 per cent of the total estimated sales of such products by the fluid milk industry within the Province of Ontario.

It should be clearly understood that the foregoing proportions are based on the estimate of the fluid milk industry's over-all sales in Ontario of ninety million dollars, which amount has been developed by Mr. Entwistle as shown in Table 14 of his report.

These three companies unquestionably exercise a large influence in the industry in Ontario, not only because of the efficiency of their methods and the high quality of their products, but because of the lead which they give independent concerns which operate in a similar fashion. The great diversification in their operation which, as will be pointed out later, has a very substantial influence on their profit position and their earning capacity, is a matter for serious consideration. This will be apparent when it is realized that, out of an estimated total of $37,000,000, representing products other than fluid milk itself, sold by fluid milk distributors during the fiscal year next preceding 1st October, 1946, approximately 53 per cent was sold by these three large companies.

In the result they are in a position to exercise a powerful influence on the industry. The most that can be said is that while there is no actual monopoly, the distribution of fluid milk is a business in which large profits lie in large volume of distribution, and this fact naturally tends towards monopoly. From the consumer viewpoint, as long as this tendency does not crystalize into actual monopoly control, it may not be a bad thing. As an example of the tendency, the concentration of the distributing industry in a few hands may be exemplified by the record set out in Appendix 20 of the Toronto market in the years since the Milk Control Board was established. Briefly, starting in 1934 with 95 licenses issued, 1945 saw the number reduced to 53, largely through sale and amalgamation. This tendency, which is more apparent in the markets with large populations, is a development to which due weight must be given in determining any general policy of control and of price fixing.

If the tendency observed is as strongly marked under conditions in which the price paid the producer and the price charged the consumer are both fixed by governmental authority, it becomes a very important matter to determine, from the viewpoint of public policy, which direction the industry is to take in future. The problem is, of course, closely connected with the practice heretofore obtaining of fixing consumer prices, and will be discussed in greater detail. At this point it is sufficient to say that if efficiency alone and a low consumer price is the prime end, then an acceleration of the process may be desirable. If distributive monopoly grew, presumably density of delivery should increase accordingly. This might have profound effects in decreasing the amount of delivery costs. If, on the other hand, the maintenance of a large number of distributors is desired, then the process should be discouraged. It should also be considered whether, in the event that monopoly, or quasi monopoly, is reached, the public can then be adequately protected by government regulation or whether, under that situation, the ultimate remedy in the public interest may not be an over-all publicly owned utility. The desirability of this solution, which has considerable consumer support, will be examined later.

Fixation of Consumer Prices

Almost without exception both producer and distributor witnesses expressed the view that it would be disastrous to the industry as a whole if the system of fixed prices to consumers for fluid milk was abandoned.

The fear on the part of the producers was that, with the pressure of competition on the distributors, the objectionable practices which obtained in 1933 and earlier years of the depression would return, and that some producers would be induced to sell milk at below the price fixed by law or would give secret rebates. It was also feared that it would be impossible to maintain the producer price structure unless the fixed consumer price was also maintained. The argument for the distributors was most ably put in writing to me by their Counsel, and I do not think I can do better than quote it. It was put as follows:

> "The Association does wish, however, to again comment briefly on one important matter that has been repeatedly raised before the Commission, namely Price Control.
>
> "Virtually all those who have appeared before the Commission have approved of the principle of a fixed price to the milk producer, but there has been some considerable difference of opinion as to the advisability of permitting or compelling a fixed price to the consumer. Accepting the wisdom of the control of producers' prices, this Association submits that such control will, in practice, be ineffective unless it is accompanied by a controlled consumer price, and that to have the one without the other will soon result in instability of production prices, particularly during periods of abundant milk supply. Logically, it may be argued that a free consumer price makes for true competition and for efficiency within the industry. Practically, and based on former experience, it would seem to be likely to result in a chaotic condition harmful to producer, consumer and distributor alike. Apart altogether from the possibility that some of the less ethical distributors and producers may make under-cover deals for rebates and allowances, there is the fact that in many Ontario markets there are producer-distributors, producing their own milk and marketing it to their own customers, and it is submitted that it is impossible to enforce, as to these operators, any fixed producer price. They can comply with any price fixing regulation by crediting themselves with the proper producer price, but it is difficult to see how they can be compelled to observe any such hypothetical cost when they come to fix their selling price. Any large scale price cutting by producer-distributors or by any other distributors would result in a price war, as established distributional concerns would be compelled to meet competitive prices even if they did so at a loss, and in the long run the costs of price wars are paid for by the consuming public.
>
> "It is significant that the majority of producers and their associations, in giving evidence before the Commission, favoured both a producer and consumer fixed price, and it is equally significant that every Province of Canada has Milk Control legislation not unlike that of Ontario.

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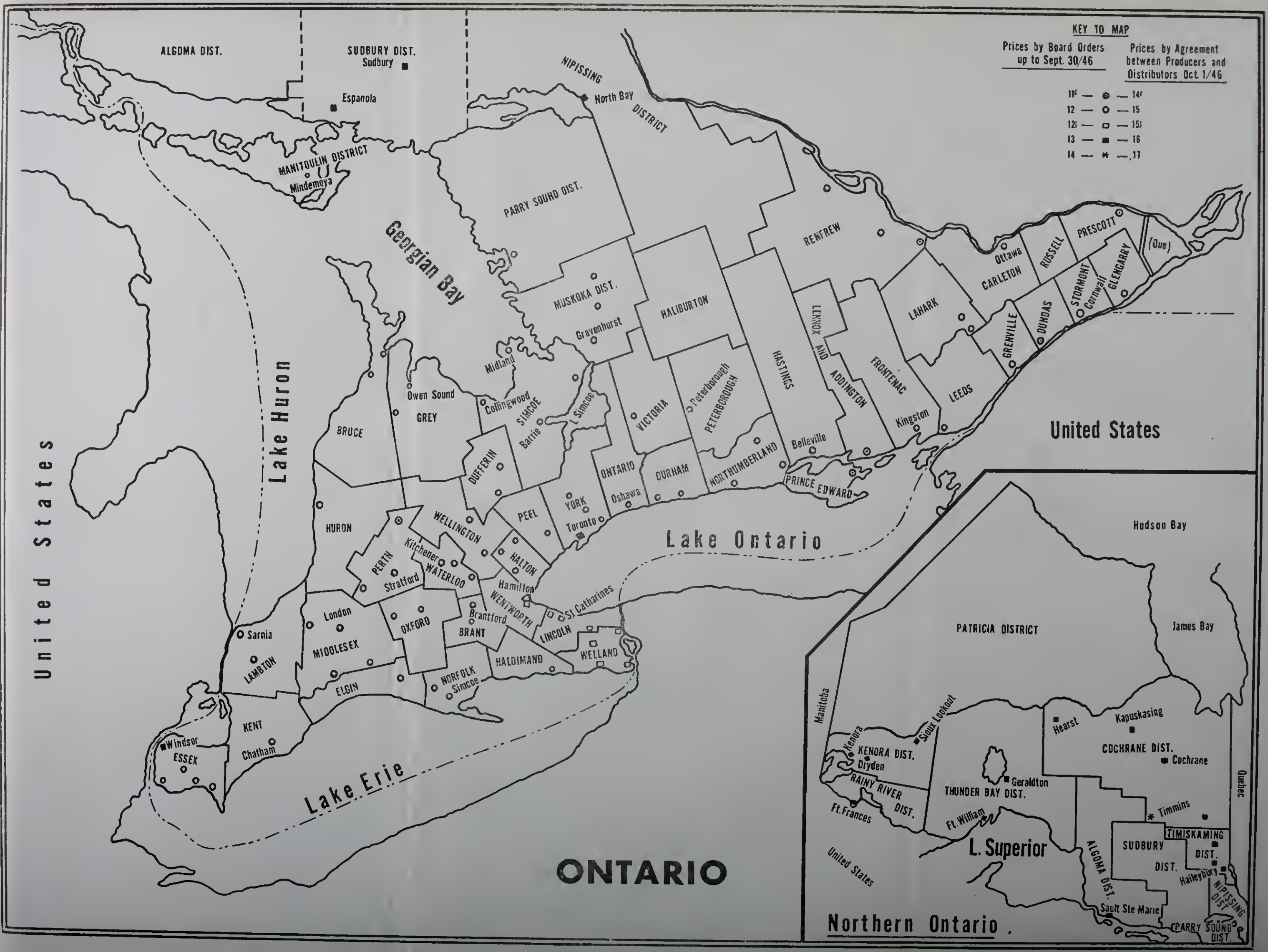
KEY TO MAP
Prices by Board Orders up to Sept. 30/46
Prices by Agreement between Producers and Distributors Oct. 1/46
11¢ — ◎ — 14¢
12 — ○ — 15
12½ — ▢ — 15½
13 — ■ — 16
14 — ✱ — 17
ALGOMA DIST.
SUDBURY DIST.
Sudbury
Espanola
NIPISSING DISTRICT
North Bay
MANITOULIN DISTRICT
Mindemoya
PARRY SOUND DIST.
Georgian Bay
MUSKOKA DIST.
Gravenhurst
HALIBURTON
RENFREW
Ottawa
CARLETON
RUSSELL
PRESCOTT
(Que)
STORMONT
Cornwall
GLENGARRY
DUNDAS
GRENVILLE
LANARK
LEEDS
FRONTENAC
Kingston
LENNOX AND ADDINGTON
HASTINGS
Belleville
PETERBOROUGH
Peterborough
VICTORIA
NORTHUMBERLAND
PRINCE EDWARD
DURHAM
ONTARIO
Oshawa
YORK
Toronto
PEEL
L. Simcoe
SIMCOE
Barrie
Midland
Collingwood
Owen Sound
GREY
BRUCE
DUFFERIN
WELLINGTON
HALTON
Hamilton
WENTWORTH
Kitchener
WATERLOO
PERTH
Stratford
HURON
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LINCOLN
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HALDIMAND
NORFOLK
Simcoe
ELGIN
KENT
Chatham
Windsor
ESSEX
Lake Erie
Lake Ontario
United States
ONTARIO
Hudson Bay
James Bay
PATRICIA DISTRICT
Manitoba
Kenora
KENORA DIST.
Dryden
Sioux Lookout
RAINY RIVER DIST.
Ft. Frances
THUNDER BAY DIST.
Geraldton
Ft. William
L. Superior
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Kapuskasing
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Cochrane
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TIMISKAMING DIST.
Haileybury
SUDBURY DIST.
ALGOMA DIST.
Sault Ste Marie
NIPISSING DIST.
PARRY SOUND DIST.
Quebec
Northern Ontario

and in every province there is some measure of fixation of both the buying and the selling prices. It is submitted that the common experience rather than the theory, furnishes the best guide. Reference has been made to the fact that in many U.S. markets the producer price is fixed while the consumer price is free, and this is admitted, but it is suggested that in most of such markets both the producers and distributors are particularly well organized, and while there may be no legal fixing of the selling price, it is in practice stabilized by trade agreement. It should also be borne in mind that some sixteen States of the Union have legislation authorizing or permitting the fixing of both prices, there being included in the list a number of the more populous states, such as California, Massachusetts, New Jersey, Pennsylvania, etc. (See Bartlett 'The Milk Industry,' page 82).

"This association does not ask for the untrammelled right to fix consumer prices by agreement within the trade, but concedes that there should be strict and constant supervision by the Milk Board of all prices, and that the price schedules should only be approved following careful and complete inquiry by the Board; that the Board should consider conditions existing in each market area; and that it should keep running statistics as to costs, profits, etc., so as to permit it to make revisions from time to time to ensure that at all times the consumer price is such as to give the producer a fair return and the distributor no more than a fair profit, based on efficient operation.

"It is also submitted that the maintenance of a stable producer-consumer market price of milk is essential if the present high quality of the product is to be properly guarded. The cutting of prices to a point where some dairies will find it difficult to operate will not improbably result in a letting down of the care presently taken in processing, and in a diminution of service to the consumers. Finally, it has already been pointed out and I beg leave here to repeat, that under a somewhat rigid system of price control the price of milk over the last few years advanced less than the price of other food commodities, and is at the present time in Ontario sold for a price that compares favourably with that being charged anywhere in North America, and is considerably under what is being charged in those major U. S. markets, where there is no consumer price fixing. With proper and constant supervision and survey by the Milk Control Board, it is submitted that the fixing of the consumer price will be in the interest of the consumer as would seem to have been demonstrated over the past few years."

In my opinion the obvious answer to the fears of the producer is the creation of a marketing authority for the producers of fluid milk which would deal directly with the distributors, which would handle the accounting and which in effect would stand between the producers and distributors. While this may not be a practical solution of the difficulty at the present time, it is the only satisfactory solution open to the producers.

In my view, which is based on considerable personal experience, if prices paid to producers are to be fixed, the difficulty of enforcing them where there is no effective control over the source of supply, is, in practice, very great. It may well be that, if it is considered desirable to do away with a fixed price to the consumer, that one of the essential prerequisites of such a move is the organization of the producers on such a basis that they can enforce the price fixed to them, or that it can be readily enforced by an agency of government. If such an organization is not practicable at the moment, consideration should be given to fixing minimum prices to consumers at a level sufficient to protect the fixed producer price. I was advised that this was practised in the Montreal market. Insofar as the distributors themselves are concerned, such a move would immediately restore a large measure of competition which has now ceased to exist. It has been pointed out that in the United States, as a result of the depression in the 1930's, some 26 states enacted legislation to fix prices which consumers should pay for milk. By the end of 1940 this practice had been discontinued in eight states and the federal government had also abandoned it. Apparently the populous states of Indiana and Wisconsin have since discontinued their control, and of the 18 states New York and Connecticut do not authorize the fixing of consumer prices. It is worthy of note, however, that the producers in three of the principal markets in New York State are organized in a much more substantial way then they are in Ontario and reference to a discussion of this may be found in an earlier part of this report dealing with producers.

One of the tendencies which might develop if consumer price fixing were abandoned in Ontario is the acceleration of a process towards monopoly. This at least would happen if the removal of the fixed prices resulted in price competition among distributors. It is quite clear that when marketing agreements are being reached and consumer prices are fixed under them with the backing of the Milk Control Board, not only the larger and more efficient distributors must be kept in mind but the requirements of all distributors in the particular market under consideration. If a consumer's price is fixed it must be one which may well result in a profit to the large volume distributor entirely out of proportion to that enjoyed by the smaller distributor.

It is a matter of general public policy to decide whether it is desirable in the distribution of fluid milk to have a few large and efficient distributors or whether there is sufficient social value in the maintenance of the 850 or more which at present operate in the province. I am satisfied that the gradual process towards consolidation, amalgamation and the purchase by larger units in the distribution end of the industry, would be greatly accelerated if the practice of maintaining a fixed consumer price were abandoned. It unquestionably cannot be abandoned without a cost to the community. This is a matter of policy on which it would not be proper for me to comment but the problem is a real one and must be faced. At a time, however, when it is obvious, I think, that the consumer price of milk is decreasing the consumption, it may well be that the consumers are entitled to the benefit of large scale operations and a lower price from those distributors who can afford to offer it. It must, I think, be recognized from the experience of the years since 1939, and in other jurisdictions, that cheaper milk means larger consumption of milk.

As will appear in the chapter dealing with the consumer case as presented to me, the increased price was represented to be a particular hardship on the lowest income groups. I doubt, however, whether the evidence produced in support of this view substantiates the position taken, which at times seemed to resemble propaganda rather than any serious presentation based on the facts of the case.

While there can be little doubt of the desirability of increased milk consumption on the part of the lowest income group, the evidence that I have heard raises serious doubt as to whether the members of this group have ever been substantial consumers of milk. They are probably too close to subsistence level to afford it. Unquestionably during the war years many of them, through their greatly improved incomes resulting from work in war factories, and because of shortages of alternative beverages, particularly those utilizing sugar, consumed considerably more milk in one form or another than they normally did. There were, for example, large sales of chocolate drink in the factories. In the survey made on behalf of the Dominion Dairy in Toronto, evidence was given by Mr. Aird which indicated that in those parts of the market occupied chiefly by persons of low income, there was not a substantial consumption of milk in the home. The evidence I received from one representative of the Neighbourhood Workers Association in Toronto, called by Commission Counsel, indicated, however, that there had been a very substantial increase in consumption in what might be called the lower middle income group, that is where the wage earner earned $30.00 to $40.00 a week. This group had been reached by the nutritionists in the various Departments of Health and had become convinced of the necessity of larger milk consumption. Admittedly members of this group have been very hard hit by the increase in price of milk to the consumer in October, 1946. This group, of course, has also been very seriously hurt by the large increase in the cost of other necessary commodities, which has taken place over the last eighteen months. Despite this, however, I think it can still be laid down as a general principle that cheap milk for the most part means very substantial consumption. This has been experienced in other jurisdictions and it is interesting to see that in England, in the report of the Reorganization Commission for Milk made in 1933 under the Chairmanship of Sir Edward Grigg, the following observation is made:

> "The retail price for milk in this country since the war has been maintained at a level which makes it difficult to guage a fair price based upon consumption over any considerable period, and there is no ground for assuming that lower prices would not lead to increased consumption. The fact that retail prices in this country have not fallen in sympathy with other retail prices may be assumed to have restricted the sale of milk in some measure. If the demand for milk is to be extended gradually but steadily iny future years, stimulus which would be given to this movement through a lower retail price must be constantly borne in mind."

The findings of numerous milk consumption studies undertaken under the supervision of Dr. W. C. Hopper, then of the Economics Division of the Dominion Department of Agriculture, in different parts of Canada, clearly indicate that the factor mainly responsible for determining the amount of milk consumed is the economic ability to purchase it. The same general conclusion has been arrived at in many similar studies made in various parts of the United States in recent years.

Cheap milk is, therefore, a very desirable end to be obtained, and if competition as to price results in attaining it, then in my view it is a competition which the consuming public are entitled to have in the industry, and of which they should obtain the benefit.

The alternative to insuring effective competition in the industry is a control through the agency of Milk Boards with ample price fixing power, who would progressively force a narrowing of the distributor's spread. It would be necessary to establish such boards with sufficient power and freedom from interference to bring this about. Such a control is obviously very expensive to the public. It would involve the acquisition of the most detailed knowledge of the cost and profit position of each distributor, and would be necessarily arbitrary and onerous to the industry.

I am satisfied, however, from the evidence before me, that it is only by some such pressure, either that of competition or of government control of prices, that the industry can be moved to effect the necessary economies in the distribution end, which would lower the cost of distributing milk. In my view this end is essentially desirable. I think the results would be better if the industry was left to find these means itself, but unless there is sufficient pressure to bring it about as a matter of necessity, the experience of the last fifteen years would indicate that the industry moves with extreme slowness.

If government control is selected, it will logically lead in the end to public ownership of the means of distributing fluid milk to the consumers. As will appear in the chapter dealing with the consumer, there was an almost pathetic belief on the part of consumer representatives who appeared before me that the creation of such a form of public ownership would inevitably result in cheaper milk. I see nothing in the experience in other jurisdictions or in the evidence I heard which would justify this assumption. It is quite true that if the sale of milk through a public utility reached large volume, in the eventual result the profits accruing from such sales, if they were at prices which would permit of a reasonable profit, would accumulate and might be used to improve the processes employed or lessen the cost to the consuming public. In any event such a solution is one which would take a considerable period of time and offers no immediate reduction in the price of milk to the consuming public. Probably the most efficient municipal dairy in the world is that at Wellington, New Zealand, and it underwent nearly five years of operation before it was in a position to pass back any of the benefits it obtained from consolidation in distribution to the consuming public. This indicates in the initial stages of public utility distribution large capital outlays are required. This fact alone prevents any immediate possibility of consumer price reductions if this method of distribution were adopted.

Public ownership does not necessarily mean cheaper milk unless it is a very well managed public owernship. The dairy industry is admittedly one which requires expert management and long experience.

As I have said, unless some real competitive element is introduced into the business at the present time, or unless pressures are brought on the distributors by government control, there is very little hope of the necessary economies being found or developed. If some means can be found by which a large number of those in the distributing end of the industry can put into effect a co-operative effort to lessen costs of distribution, such as co-operative deliveries, or if, for example, they found it advisable to enter into co-operative purchasing of supplies or could agree on the maintaining of the economies effected in 1942 under the pressure of wartime conditions, there would seem to be some hope of eventually reducing milk prices to the consumer. It is quite true that probably none of these measures in themselves would result in any startling savings. However, if a concerted effort were made by the industry, the adding together of all the small savings which might be effected would in the end prove substantial. At the moment the possibility of securing such general agreement in the industry seems far removed.

Conclusions on Price

Looking at the matter strictly on a cost basis, I do not think it can be said that present prices are unreasonable from the viewpoint of the distributor. But the distributor should bear in mind that he has an obligation to the public to furnish his product more cheaply if it can be so furnished. If the distributors themselves cannot effect a further rationalization of the industry then it seems to me that one of the pressures which I have mentioned must be applied in the public interest.

To repeat, the oft repeated belief by consumer groups that public ownership of distribution would immediately result in large scale economies is not, I think, warranted. Such a result does not arise because ownership is either public or private, but must arise from lower costs achieved by better management, by more effective and rational methods of distribution irrespective of the form of ownership. If privately owned industry cannot obtain these results in connection with a vital food product, there is very strong argument for public ownership where these methods can presumably be given a trial.

One other method of insuring some measure of actual competition would be to permit the formation of consumer co-operatives which are in effect prohibited by Section 11 of the Milk Control Act, which was passed to help maintain the concept of the fixed consumer price. Surely if consumers can operate under proper sanitary standards they should be allowed to try and provide themselves with cheaper milk by being allowed to share in the profits of their operations by receiving patronage dividends. Consideration might well be given to eliminating Section 11 from the Milk Control Act. It is absurd to suggest that the distributors cannot face this form of competition.

These matters will be discussed later at greater length, but the industry must now seriously consider them.

Financial Assistance to Aid Consumption

Under present circumstances, without any of the changes which I have suggested, I think it can be fairly said that, taking an over-all view, and disregarding the position of the large distributors, there is no hope at the present moment of cheaper milk to the consuming public, apart from some form of government assistance to consumers such as the consumer subsidy paid by the Dominion Government during the war years. The objections to such payments, both from the viewpoint of the industry and the public, are serious. While they may well have been justified in view of the over-all price policy under the emergency of war, in my view they are not justified under peace time conditions.

Subsidies tend to create a false sense of values in the industry, they perpetuate static condition and, if sufficient, remove the incentive to better and cheaper methods of distribution. Moreover, they in effect create a false sense of security for both distributor and consumer as well as the producer, and any change of policy which suddenly removes them creates serious dislocations. There is, in addition, the psychological objection that the payment represented by such subsidies is not something that is truly earned. In the representations made to me in favour of them no attention was paid to the source from which they were to come. And there was no clear realization that they involved a social cost directly out of the taxpayer's pocket. Any subsidy which would discriminate in favour of those who might need it because of their low income was rejected as charity or as creating unnecessary humiliation in the recipient. It would seem to me that this is a distinction without a difference. Their charitable nature would seem to persist irrespective of the income of the recipient. If public charity is humiliating for some it is surely equally so for all who receive it. As to the cost of the subsidy, if the experience of the war years is any guide the amount required to effect even a two cent reduction per quart of milk would amount to something between eight and nine million dollars a year. Presumably this money would have to be raised from the public pocket by taxes, and it might well be said from the viewpoint of many consumers that what they save at the kitchen door they would lose in the additional taxes they would have to pay.

If it were deemed socially advisable to reduce the cost of milk by public assistance so as to make it readily available to those persons in the community needing it most, the only recommendation I would have to make is that consideration might be given to supplying school children with milk free or at low cost irrespective of age or income group. Under the somewhat different food situation existing in the United Kingdom this policy was adopted and has met with a very fair measure of success. It would unquestionably appeal to health authorities. In effect those who can most benefit from its consumption as an article of diet would be assured of at least a minimum supply. In a small pamphlet describing the functioning of the milk marketing scheme in Britain, prepared for ex-service employees of the scheme, the following paragraphs may be of interest:

> ### "SCHOOL MILK
>
> "A word as to this Milk-in-Schools Scheme, which played such an important part in increasing consumption. The credit for introducing this scheme belongs to the National Milk Publicity Council. It received a great fillip from the introduction of the Milk Marketing Scheme when the Board and Distributors co-operated with the Ministry of Health and arranged the extension of the provision of milk at cheap rates in 1934, so that children received one-third of a pint of milk for ½d., equivalent to 1/- per gallon. The loss on this reduced price was borne by the distributor and the Board together with assistance from the Government.
>
> "Experiments were also carried out in depressed areas such as the Rhondda Valley, Whitehaven, Jarrow and Walker-on-Tyne in which young children, nursing and expectant mothers received milk at a reduced price at the rate of one pint per day. It was seen at once that the average consumption of milk increased appreciably. The result was that in 1938 it was decided that a scheme of a similar type should be applied throughout the whole country, but with the introduction of an income limitation. Controlled by local authorities, the scheme was gradually coming into operation when the war began and was subsequently replaced by the National Milk Scheme.
>
> ### "SPENDING POWER AND MILK
>
> "Consumption began to rise after the out-break of war because of the increased spending power of the lower income groups. The importance of milk for young people and mothers from a nutritional aspect was recognised in July, 1940, and the National Milk Scheme was introduced. This entitled expectant mothers and children up to five years of age to one pint of milk per day at 2d. per pint. Where the applicants' income did not reach a certain level it was supplied free.
>
> "The success of this scheme can be seen in that the amount of milk sold under it amounts to 150 million gallons per annum. Through the School Milk Scheme consumption is 43 million gallons a year."

Apart from this somewhat limited form of public assistance to greater milk consumption it would, I believe, be better to pursue methods in reorganizing the industry itself to achieve cheap milk distribution. Such a course of action would create a condition justifying cheaper prices as a result of the actual operation of all phases of the industry and would not rest on the artificial foundation of gratuitous assistance. To grant such assistance is equivalent to admitting defeat in obtaining better and more rational methods of distribution. No such necessity has yet been demonstrated.

CHAPTER VIII

Examination of the Fluid Milk Price Increase October 1st, 1946

I have not dealt, except in a general way, with the specific price increases for fluid milk which occurred at the end of September, 1946. I asked Mr. Entwistle if, on the basis of his general over-all figure, he would calculate the result to the industry if the price increase had been limited to two cents per quart with the corresponding variations for other items, instead of the three cents which was arrived at. He has also worked out what the result would have been if the price increase had been two and a half cents instead of three cents, and the following table which he has furnished me shows the results of these calculations:

PROJECTED STATEMENT OF NET PROFITS (BEFORE TAXES)
FOR TWELVE MONTH PERIOD
ALLOWING FOR SALES OF 430 MILLION QUARTS OF FLUID MILK
ON THE BASIS OF 15 CENTS AND 15½ CENTS PER QUART TO
THE CONSUMER

Overall	On Basis of	
	15 cents	15½ cents
Estimated net profits from all products other than fluid milk	$2,382,831	$2,382,831
Add:		
Estimated profit from fluid milk based on 430 million quarts at .21 of one cent per quart as quoted in report for 13 cent milk	903,000	903,000
	$3,285,831	$3,285,831
Add:		
Estimated additional revenue from advance in price from 13 cents to 15 cents and 15½ cents	8,600,000	(a) 10,750,000
	$11,885,831	$14,035,831
Deduct:		
Amount to be passed back to producer 2.63 cents equal to $1.00 per 100 lbs. of whole milk	11,309,000	(b) 11,309,000
Adjusted net profits of distributive industry before provision for profits and taxes	$576,831	$2,726,831

Fluid Milk	On Basis of 15 cents	On Basis of 15½ cents
Profit as above	$903,000	$903,000
Add:		
Item (a)	8,600,000	10,750,000
	$9,503,000	$11,653,000
Deduct:		
Item (b)	11,309,000	11,309,000
Profit or (loss)	($1,806,000) (loss)	$344,000 (profit)

The above projection does not allow for variations in cost due to differences in volume neither does it allow for any increases in costs which may have occurred since the latter part of 1946.

The effect of a difference of one-half a cent a quart in this calculation is quite startling and illustrates the point made in the chapter on distributors, that is, that they operate on a very narrow spread. It is, I think, quite obvious that a sum as small as half a cent a quart can have a profound effect on the profit position of the distributors.

I think it should also be recognized that this calculation speaks after the event and after some months of its operation, and not in advance, and indicates the essential undesirability of price-fixing at the consumer level. It is asking too much of the Milk Control Board, or any other rate-fixing body, to calculate the consumer price of milk to the point where an absolutely desirable result, insofar as the consumer is concerned, can be guaranteed. If fractional rates affect the industry's profit position in such a marked way, it places a responsibility on the price-fixing body beyond what should be reasonably imposed. In advance of the actual operation of such a price, the price arrived at must always be essentially a good guess, and therefore more or less an arbitrary one. It is quite obvious that even a fraction of a cent too much results in tremendous profit to the large volume distributors. It is equally obvious that a fraction of a cent too little may result in equally large losses, not only to the large volume distributors but to all the distributors.

Looking at all the distributors, it must be remembered that in number the great majority of them are not large volume distributors. As appears from Mr. Entwistle's report, there are about 58 who engage in what he calls a blended operation, that is, who sell substantial quantities of other dairy products in addition to fluid milk. As I have stated earlier, the total number of individual distributors in the Province is something in excess of 850. In the opinion of the Accountants, the remarks which I am about to make would apply to something less than 150 of the total number. Looking at all the distributors in this way, therefore, it cannot be said that the prices reached at the end of September, 1946, in view of the over-all circumstances and position of the distributors, were unreasonable. Nevertheless, as Mr. Entwistle suggests, and I agree, there are unquestionably many large volume distributors who can afford to sell milk for less than they are doing at present. The number of these, however, is less than 150 and, in Mr. Entwistle's opinion, would constitute roughly not more than 12 per cent of all distributors. This group, however, apparently sell in excess of 50 per cent of the total of milk sold for fluid consumption in the Province. The general conclusion to be drawn from this should be obvious to all. Attention is directed to the concluding observations in Mr. Entwistle's report in Appendix 18, where the matter is also discussed.

This calculation illustrates in a most graphic fashion the essential undesirability of fixing prices at the consumer level. It also underlines the observations made earlier in the report regarding the essential difficulty of arriving at prices which will permit the whole industry to operate on a profitable basis. The profit bonus to the large volume distributor in the result is generally out of all proportion to his needs. It is obvious from what has just been said that, if prices are fixed at the consumer level, any price so fixed sufficient to guarantee the continued existence of the many smaller distributors, will result in inordinate profits to the larger volume distributors.

CHAPTER IX

Consumption and the Position of the Consumers

General

The case presented by those representing the consumer groups before the enquiry was based entirely on need. The only criticism of the existing structure was directed at the distributive end and in the case of certain witnesses there was an implied assumption that lower prices for milk could be secured if certain changes in distribution were brought about. No facts to support this were presented. No concerted effort was made by any consumer body to consistently follow the course of the Commission's enquiry. Most valuable assistance was rendered, however, in the early days, by the presence at the enquiry as Counsel for the consumers of St. Patrick's Riding of Mr. A. Kelso Roberts, K.C., M.L.A., who represents that Riding for the City of Toronto. Mr. Roberts' help in cross-examination of the witnesses was of very great assistance. Apart from this, Commission Counsel, in pursuit of his duties, tried with considerable success to see that the consumer's viewpoint was examined and dealt with in the course of the evidence. The only places where any coherent and concerted effort was made to examine the consumer position was in the Cities of Ottawa and Windsor. In Ottawa Mr. Gordon Medcalf, K.C., the City Solicitor, appeared, together with two ladies of great ability, Mrs. A. S. Whiteley and Mrs. Russell White. In Windsor a group of housewives who were interested in the problem gave me the advantage of their opinions and viewpoints and I would like to record my appreciation of their assistance.

A certain amount of evidence on behalf of consumers was also received from those representing various labour unions, the C.C.F. party, representatives of the Progressive-Labour party and what is known as the Consumers' Federated Council of the City of Toronto.

Apart from the brief of the C.C.F. party, which discussed the situation in many aspects and was most suggestive, the difficulty with most of these representations as far as the enquiry was concerned, was the fact that beyond stating that milk was a necessary and essential article of diet, that its increased consumption was greatly to be desired, that the 1946 price increases had seriously curtailed its consumption on the part of the lowest income group, there was very little effort made to examine either the reasonableness or unreasonableness of the price increase insofar as the economic factors relating to it were concerned, nor to indicate practical methods of bringing about price reductions. This was qualified by three suggestions made, firstly, that fluid milk should be distributed through publicly owned utilities; secondly, that government subsidies be renewed to reduce the consumer price; and thirdly, that the Milk Control Act should be amended so as to permit the complete functioning of consumer co-operatives.

As I have said, the case was put principally on the basis of need. With almost complete unanimity, these groups indicated their belief that producers should certainly receive their cost of production plus a reasonable profit.

They were also desirous that the deliverymen for the dairies should receive their present or better scale of wages. In this connection I do not think I am unfair in saying that there they stopped short. At no time did I receive any adequate explanation of how these costs were to be met, and how the obtaining of cheaper milk could be made consistent with present or increased costs resulting from higher producer prices and higher returns to deliverymen.

It is perhaps natural that this should be the case. Owing to the dissemination of knowledge from various nutritionists in respect to milk as an article of diet, there is no question that a large section of the general public during the last few years had begun to gain a much fuller appreciation of the value of milk as a food. Its special desirability from the standpoint of growing children has become increasingly realized. The consumers are a disorganized and incoherent body. It is natural that they should be such. It was not to be expected that any concerted and consistent effort would be made on their behalf before the enquiry.

As previously indicated, three concrete suggestions emerged from the representations made by these witnesses. The first suggestion was that the way to get cheaper milk for consumers was to lower prices through the public ownership, whether municipal or provincial, of the means of distribution, secondly, legislation permitting consumer co-operatives and patronage dividends, thirdly, it was suggested that, if other means failed, there should be a subsidy from public funds. In most cases the suggestion was that it come from the Provincial Treasury in the form of a direct consumer subsidy. I have discussed the merits of this suggestion in the chapter on the Distributors. Generally it can be said that the consumer position, despite the various forms in which it was presented, was that milk was a necessity of life; that if any means could be found to reduce its cost to those who needed it, namely, the consuming public and particularly those who had no financial ability to buy sufficient quantities of it, such means should be found. If sound methods can be discovered to achieve this result I am in agreement with this view.

Dealing with the second suggestion first, that is the suggestion that the consumption of milk should be directly subsidized by the Provincial Government, I have already discussed this suggestion in the chapter dealing with distribution. As far as the various consumer representations were concerned, thinking had not proceeded beyond the suggestion itself. Very little attention was paid to the source from which the money was to come. It seemed to be assumed that it could come from some inexhaustible supply which could be drawn on without much cost to anyone. Nothing, of course, could be further from the truth. If the retail consumption of milk is to be subsidized, it is obviously a subsidy which would come from Provincial funds, and it could only be obtained from the imposition of taxes additional to those already imposed on the people of the Province. However the tax to supply these funds might be devised, the consumer would be paying them out of one pocket and obtaining the benefit of them, in accordance with the amount of his consumption of milk, in the other. There is, of course, the inescapable fact that the taxes would presumably fall on those most able to pay them, although this cannot always be assumed, and the subsidy would benefit all alike irrespective of income or financial situation. It was suggested that the subsidy might be limited to those whose need was greatest. As far as the witnesses before me were concerned, they uniformly rejected this suggestion, chiefly on the ground that any such distinction was humiliating, and that where a necessity such as milk was concerned, a means test should not be required of those who were not fortunate enough to be able to buy adequate quantities of it.

Insofar as the suggestion that the price increase had deprived the lowest income groups of their supply of milk, there was no direct evidence of this before me. The assertions were baldly made without supporting or factual data. The only factual data received was a survey filed on behalf of one of the distributors, which recorded the results of a sample taken in the City of Toronto by the Canadian Facts Limited, an organization whose reports, I believe, are reliable, and can be accepted. In this survey, which I am including as Appendix 21, because of its importance, a cross-section of the Toronto market was taken. Income groups were divided into High, Second, Third and Low categories, and information was obtained on a number of points of interest to the enquiry. Of the Low Income group, 26.3 per cent stated they were buying substantially less milk since the price increase. The Third Income group were also reported buying 25.5 per cent less, while the High Income group and the Second group showed reduction in purchases of 14 per cent and 13.3 per cent respectively. It is significant, I think, that those with children who were buying less constituted 26.1 per cent of the total interviewed, and those without children constituted 17.3 per cent.

Acme Farmers Dairy also made a survey on 15 routes. The results, I think, are of sufficient interest to set it out as follows:

	No. customer	Purchased more than 1 quart	Buy less than 1 quart	Buy 2 quarts or more	Buy 3 quarts or more	Buy 4 quarts or more	Buy pints
Wealthy	552	31.8%	68.2%	7 %	5.4%	1.6%	15.4%
Moderate-plus	676	26.4	73.6	3.9	2.8	1.1	13.8
Moderate	601	19.9	80.1	2.1	1.8	.3	14.5
Low Income	501	15.8	84.2	2.6	1.8	.8	30.3
Small apartments Low Income	527	19.0	81.0	3.1	2.7	.4	21.4
Total	2,857						

The results of these surveys would seem to agree in the main with the conclusions on milk consumption arrived at by Dr. W. C. Hopper in his milk consumption surveys conducted prior to the War. These are published by the Dominion Department of Agriculture.

If these surveys are truly representative, it would indicate that, irrespective of the health requirements of the lowest income groups, a very substantial amount of further education work must be conducted among this group before they will fully realize the necessity of larger milk consumption.

Co-operatives

As to the other suggestion, that Co-operatives be permitted to function in the distribution end of the milk industry, Section 11 of the Milk Control Act provides:

> "Notwithstanding anything in The Companies Act, or in any letters patent of incorporation, or supplementary letters patent, or in any other general or special Act contained no person, firm or corporation, shall give or distribute any fund, refund, rebate, interest or dividend to any purchaser of milk therefrom either directly or indirectly in respect of any such purchases of milk except such interest or dividend as may be earned on capital invested by such purchaser in such firm or corporation."

Obviously this prevents the basic operation of a consumer co-operative which requires that its profits be shared among its members in proportion to the patronage they supply. The section of the Milk Control Act referred to was passed as a result of what is known as the milk war in the City of Hamilton. It was obviously quite necessary under the theory that a uniform price to consumers should be fixed by force of law. Apart from this, however, it would seem to have no justification in logic or common sense. As I have already indicated, if there is to be a fixed price to consumers obviously co-operatives in the ordinary sense cannot be permitted. In my view, if a group of the consuming public desire to organize themselves into a distributing unit for fluid milk on co-operative principles; and if they have sufficient capital to comply with the health and sanitary regulations, there is no reason I can see why they should be precluded from doing so in connection with such a vital food product as milk. Indeed, it would seem the part of wisdom to encourage them to do so if they are enterprising enough to undertake such a venture.

Whether such a venture would be successful, in view of the narrow margin within which the distributing end of the dairy industry has to operate, is, of course, another question. I was particularly interested in the evidence of Mayor Lawrence of the City of Hamilton, who has been a director for some fifteen years of the Hamilton Co-operative Creameries. It was to curb the activities of this organization that Section 11 of the Milk Control Act was passed in the year 1935. Since that time this co-operative, not being able to declare a patronage dividend, has acted substantially in the manner of any other privately owned distributor. Mayor Lawrence was asked if there was anything excessive in the profits which that dairy made and he said none whatever. He also stated that the profit was very small. As he put it, there was a rigid ceiling fixed and during quite a lengthy period the floor had been coming up. Nevertheless, Mayor Lawrence was of the opinion that the section of the Milk Control Act which effectively prevents the operation of consumer co-operatives should be deleted. To those who are interested, I would direct attention to Mayor Lawrence's evidence, particularly under cross-examination by Mr. Sedgwick and Mr. McLean. It may well be that, under the very narrow margins now obtaining, consumer co-operatives distributing milk in any given market would not make sufficient profit or obtain a sufficiently large volume to effectively decrease the cost of milk to the consumer. Nevertheless, if there is a chance of them doing so, that road should not be closed to the consumer.

Milk as a Public Utility

Coming now to the question of the distribution of milk as a public utility, most consumer representatives seemed to feel that this would solve their difficulties. Unfortunately, the problem is not as simple as appeared to these witnesses. Obviously much depends on the efficiency of the publicly managed milk distributor and the extent to which competition is allowed by private enterprise. It did not occur to any of those advocating this scheme of things that such a public enterprise should be subject to taxation. This may or may not be desirable. Nevertheless, to the extent that such a publicly owned enterprise is free from taxation there is, in effect, being paid by the public at large a direct subsidy for its maintenance. The taxes formerly paid by private enterprise must now be raised elsewhere if the general level of public income is to be maintained. In discussing this point one must presume that no more is raised by way of taxation than is strictly necessary.

One of the most successful municipally owned dairies in the world is located in Wellington, New Zealand. It is noteworthy that the Milk Department of the City of Wellington pays all general taxes in the same way as a private company would, except income and social security taxes. As far as I am aware there is not a publicly owned milk distributing body on the North American continent except a small one in the State of North Carolina. The New Zealand experiment, which has been highly successful, is most certainly worthy of study. In consequence of this I have set forth in Appendix 22 a portion of the report of the Royal Commission appointed in March 1943 in New Zealand which enquired into the existing circumstances of the supply of milk to four metropolitan areas of the Dominion. This report was presented to the Governor General as late as August 1943. I have set out in the Appendix the observations covering the supply of milk to the metropolitan area of Wellington during 1943. Through the courtesy of the offices of the High Commissioner for New Zealand in Canada, the memorandum which I have appended to this statement of the Royal Commission was furnished by the New Zealand Secretary of External Affairs. I am advised that the present value of the New Zealand pound in terms of Canadian dollars is $3.26 for practical purposes. In comparing prices for milk and dairy products generally in New Zealand with those in Ontario it must be remembered that the general price levels in the two areas are different. The buying power of a dollar in New Zealand is definitely greater than that of a dollar in Ontario. The whole relationship between costs, wages and prices is on a lower level. Therefore, the price of a quart of milk in New Zealand cannot be simply expressed as the equivalent of the value of the New Zealand price expressed in the exchange value of that sum in Canadian currency. It is, of course, therefore, entirely fallacious to say that, when milk is produced much more cheaply in New Zealand where production and labour costs are strikingly lower than they are in Ontario, it can be produced and sold in Ontario at the New Zealand price. Nothing could be more misleading.

I have also had the privilege of perusing a report from the Manager of the Municipal Milk Department of Wellington. It would appear that it was a number of years before sufficient profits were earned to substantially reduce the cost to consumers in Wellington. This, I think, is almost certain to be the situation in Ontario. Public or municipal ownership of milk distribution cannot be regarded as an immediate panacea for the evils of high cost milk. It must, at the least, be regarded as a long term solution. In any case, in my view, it may or it may not be a solution, depending substantially on the skill of management and on the scope of the operation.

A substantial study of this problem has been made in the United States by Professor W. M. Mortenson, of the University of Wisconsin. To those interested, reference may be made to this study published by the University of Chicago Press. His conclusions would seem to indicate that milk can best be handled as a public utility where the operation is not too large. The fact that Wellington, New Zealand, is a moderate sized market would seem to sustain this view. My opinion would be that, if Public Utility Distribution will result in more efficient distribution and lower priced milk, municipalities wishing to embark on this experiment might well be permitted to do so. As I have said, it is impossible to be dogmatic about the matter. It may or may not be a solution. The only proof as to whether it is or not must come from actual experiment. I would suggest, therefore, that permissive legislation be granted to municipalities desiring to embark on such an enterprise. It would seem to me, however, that if such an enterprise is permitted to function in competition with private enterprise, it should not be left in a position to take advantage of concealed subsidies, such as remissions of taxation, but should be made liable to the same taxes as a private distributor. Such an enterprise can, surely, only justify itself if it is financially able to distribute milk to the consuming public at a lower price.

Summary

Apart from these three suggestions, two of which are admittedly long term solutions, considering the state of the distributors as a whole there would appear to be no means of giving cheaper milk to the public immediately. If the operation of competition in the industry does not bring this result from those able to make some reduction, then the only immediate method would appear to be a direct consumer subsidy which, for the reasons stated, I do not recommend.

Despite the reduction in consumption since the price increases of 1946, it is worth remembering that the total consumption of fluid milk in the Province in May 1939 was 20,199,300 quarts, as compared with a total consumption for May 1947 of 37,874,800. In May 1946 the corresponding figure was 41,327,600. There is, therefore, an increase as compared with 1939, of 87.55 per cent, and a decrease, as compared with a year ago, before price increases, of 8.35 per cent. While the increased consumption since 1939 is undoubtedly due to a variety of factors, including in particular increased consumer purchasing power, it is, I think, reasonable to assume that the educational work done by what is now called The Associated Milk Foundations has had a very considerable effect. The recent tendency of these foundations to become established in a larger number of markets may well assist the consumer to greater realization of the nutritional value of milk. Admittedly there is still a large field for this, particularly in respect of low income consumers. Milk is probably one of the cheapest foods available to consumers, even at present prices. As some one suggested, it is desirable that consumers should be milk-minded as well as price-minded.

CHAPTER X

Cheese Production and the Position of the Cheese Producers

The producers producing milk for manufacture into cheese are, roughly speaking, situated generally in far Eastern Counties of Ontario, in the district centering around Belleville, and in Western Ontario in an area composed chiefly of the Counties of Oxford, Perth, Middlesex and Elgin, and areas contiguous thereto. The producers are organized in an association called The Ontario Cheese Producers' Association, and I was advised that it had a membership of approximately 25,000 members. This association was organized in 1934 and prior to that time there was little co-operative effort among those producing for the cheese factories. The producers who supply milk to the cheese factories are organized in five general areas as follows:

District Number 1, consisting of the Counties of Peterborough, Hastings, Prince Edward and Northumberland;

District Number 2, consisting of the Counties of Lennox and Addington, Frontenac, Leeds and Lanark;

District Number 3, consisting of the Counties of Glenville, Dundas, Stormont and Glengarry.

District Number 4, consisting of the Counties of Prescott, Russell, Carlton and Renfrew;

District Number 5, consisting of the County of York and every County to the west thereof having a cheese factory.

There are County Cheese Producers' Associations for each of these districts and the Counties represented in District Number 5 give some clue to where the cheese production in Western Ontario lies. The Association is financed by a levy of five cents per hundredweight of cheese produced, of which 75% is retained by the Provincial Association and 25% is sent to the County Associations. Much more cheese is produced in Ontario than is consumed in Ontario or in Canada, and I was advised that about two-thirds of the Cheddar cheese produced in Ontario is exported, and that actually this export from the Ontario cheese factories, in its turn, constituted about two-thirds of the total of Cheddar cheese exported from the whole of Canada. It has largely been exported to the United Kingdom, where over the years a market for this cheese has been built up, and I was advised that Ontario Cheddar cheese was rated in the British market as the finest Cheddar cheese imported into Great Britain.

Cheese Factories

In respect of the number of factories, the Ontario Cheese Producers' brief put it at about 600. Mr. S. L. Joss, Secretary of the Association, was inclined to place it closer to 535. These factories may be divided into two general classes: First, a relatively small number of factories owned by large companies such as the Kraft, Borden, Canadian Packers and Swifts, to cite only a few, who in number constitute about five per cent of the cheese factories in the Province. These factories buy milk from producers for cash, and the producer has no further interest in the product. For the most part they produce what are called processed cheeses, and I am advised that, insofar as the general problem of the cheese producers in Ontario is concerned, they do not at the moment greatly affect the situation. There was some evidence that this might not always be true, as apparently a number of large processing companies have been buying up privately-owned cheese factories and operating them for their own purposes or, in some cases, closing them. It cannot be said, however, that this process has reached a point where in general it affects or threatens the general control of producers of cheese milk over the manufacture of the bulk of the cheese made in Ontario. In the view of the cheese producers it is simply a tendency that requires watchful attention.

The greater bulk of factories manufacturing cheese are located close to their source of supply and manufacture cheese for groups of producers. Some of them are privately-owned, while others are owned by joint stock companies. Still others are owned co-operatively by the cheese milk producers in the adjacent areas. I was told that the joint stock companies were originally incorporated by groups of producers who financed the erection of the factories. Their practice now is to charge a fee for the making of cheese, and in some cases the shareholders are given a return on their invested capital, either by the payment of a small fixed dividend or a rebate in the amount charged for cheese manufacture. It was stated that none of the so-called privately-owned factories in this group were operated with a view to making substantial profits for their members. The charges to the producers for the manufacture of cheese are estimated generally on a basis of obtaining sufficient profit to provide for repairs and replacements of the factory and its operation, and to cover dividends paid to the shareholders.

By far the larger group of factories, however, are co-operatively owned by the producers themselves. These factories employ a cheese maker who employs his own labour. The co-operative owning the factory, however, pays the taxes and maintenance charges and keeps it in repair. There is also another type of factory which is wholly owned and operated by a cheese maker. He manufactures the cheese for the producers who bring their milk to him and he makes a charge for this service sufficient to pay his operation and maintenance costs and to give him some return for his services. In all of these cases, however, the essential method of manufacture, as far as the producer is concerned, is the same; that is, whether the cheese factory is owned by a producer-formed joint stock company or is co-operatively owned, or is owned by a cheese maker, the cheese produced in the factory remains the property of the milk producer until it is sold on what is called a Cheese Board.

Cheese Boards

Cheese Boards have a long history, but for present purposes are part of the machinery for the sale of cheese set up under what is called the Cheese Scheme, which has the effect of law under the provisions of the Farm Products Marketing Act. When the Dominion Natural Products Marketing Act of 1934 was passed, as a result of an almost unanimous poll of the cheese producers, a scheme was set up pursuant to this statute for the marketing of Ontario Cheddar cheese, which superseded previous methods which included sale of a percentage of the cheese through a co-operative selling agency with headquarters in Montreal. Subsequently, when this

Act was declared ultra vires, it was replaced in Ontario by the Farm Products Control Act, and a similar scheme was set up under this Act. The present statute, passed in 1946, is the Farm Products Marketing Act, and a new scheme has been approved under this statute. The Board set up under this scheme is called the Ontario Cheese Producers' Marketing Board. As ancillary to this Board there was incorporated a private company which is known as the Ontario Cheese Producers' Association Limited. The directors and share-holders of this Company are the members of the Ontario Cheese Producers' Marketing Board, and the idea at the time it was incorporated in 1938 was to use this Company as a marketing agency. The operation of this Company will be discussed later, but it has not been notably successful to date in affecting the general situation. Undoubtedly wartime conditions have been partly responsible for the lack of progress made.

Apart from wartime controls and special contracts, cheese is generally marketed through what are called Cheese Boards or local auction markets, which operate under the Ontario Cheese Producers' Marketing Board. The officers of these local Cheese Boards are elected by the County Producers' Associations, and they are constituted where it is most convenient for the purpose of selling cheese. They are not necessarily confined to one county or one district. They have no permanent quarters, but meet in whatever convenient premises may be available. During the cheese-producing season Board sales are held at convenient intervals, varying from one week to one month. At the sale, I am advised, the procedure is to mark on a blackboard the cheese to be sold, giving the quantity, quality, size and type which each factory is offering for sale. Buyers present then bid by auction for any part of the cheese by factories, and the price offered is noted on the blackboard. At the end of the bidding the salesman representing the cheese factory may refuse to accept the highest bid offered, and in that event the cheese goes back to the factory to be put up for sale at a subsequent Board. If, however, the salesman acting on behalf of a particular factory accepts a bid, the sale is noted on the blackboard and this is held to constitute a contract of sale, a record of which is kept by the secretary of that particular Board. While Cheese Boards operated for many years prior to 1934, the percentage of cheese sold on the Boards declined steadily until it constituted only about 20 per cent of the total production. It was because of this situation that the 1935 Cheese Marketing Scheme and the subsequent schemes were inaugurated and it was made compulsory for the factories to sell through Cheese Boards. The evidence before me indicates that this has produced a greater uniformity in prices, and that the system, generally speaking, is satisfactory to producers.

After the outbreak of war and up to the spring of 1947 the prices for cheese were controlled as part of the over-all control of the Wartime Prices and Trade Board, and consequently an artificial price structure was created which was designed to produce the necessary supply irrespective of the cost of production, and which was activated by considerations which would normally not govern the price structure of the cheese market. When price control was made generally applicable in 1941, the first ceiling price established for Cheddar cheese for the domestic market was 24 cents per pound for first grade cheese f.o.b. factory shipping point, with appropriate reduction for lower grades. These prices were subsequently slightly reduced. In addition, as part of the war effort, a large amount of cheese was requisitioned from time to time for export to Great Britain. The price for export cheese at that time, 1941, was 20 cents per pound, which included a subsidy from the Ontario Government of two cents per pound paid under the provisions of the Ontario Cheese and Hog Subsidy Act of 1941. This price was very considerably higher than that which applied in connection with the first export contracts. The first contract, which ran from May, 1940, to the end of March, 1941, arranged for a price of 14 cents. To this, however, a Dominion subsidy of .6 cents a pound was added in January, 1941. In May, 1941, this subsidy was increased to 1.6 cents a pound, thus bringing the total amount received to 16 cents a pound. To this price of 16 cents there was added an Ontario subsidy of two cents a pound and a Dominion quality premium of two cents a pound for cheese scoring 94 points or better. Thus, the total price on first quality cheese after May, 1941, was 20 cents a pound f.o.b. Montreal basis. This system was maintained until October, 1946, and at the time of the hearings before me the disposition of cheese was still governed by specific orders of the Wartime Prices and Trade Board, and a large part of cheese held in Ontario was subject to disposition by the Administrator of Dairy Products. A great deal of the evidence before me was directed to a demonstartion of the position taken by the cheese producers that the prices realized by them under these ceilings were insufficient to pay for their costs of production. At the present time, however, price ceilings on cheese have been removed, and the only controls left which in effect still govern the price received for cheese is the existence of the British contract and the prohibition of export to areas other than Great Britain and, I believe, the West Indies. Consequently, at the present time, as a necessary aftermath of the war, any other export markets are closed to the cheese producers of Ontario. It was suggested before me that possibly token shipments might be permitted to maintain the knowledge and reputation of Ontario Cheddar cheese in American markets, but these to date have not been permitted. It is obviously not within the ambit of the matters referred to me to comment on this policy, either favourably or adversely.

Insofar as costs of production are concerned, this matter has already been very thoroughly discussed in the chapter dealing with producers of fluid milk. In large measure the same considerations apply to those producing milk for cheese purposes. In the over-all survey made by the Accountants attached to the Commission, an attempt was made to calculate the cost of producing milk for cheese. This is set out as follows:

AVERAGE COST OF PRODUCING 100 POUNDS OF MILK FOR MANUFACTURING CHEESE IN ONTARIO IN 1946

Concentrates	$ .65	
Hay	.46	
Silage	.23	
Pasture	.28	
TOTAL FEED COSTS		$1.62
Dairy Herd Labour		1.00
Depreciation		.11
Hauling		.10
Miscellaneous		.35
GROSS COST		$3.18

CREDITS:		
Milk used on farm	$ .21	
Manure	.24	
Cattle sales less cattle purchases and inventory adjustments	.39	
TOTAL CREDITS		.84
AVERAGE NET COST		$2.34
ADMINISTRATION ALLOWANCE		.35
TOTAL COST INCLUDING ADMINISTRATION ALLOWANCE		$2.69

It will be seen that, apart from any administration allowance, it works out on the general average to $2.34 per hundredweight of milk. If administration allowance is made of 35 cents per hundredweight, the cost figure is $2.69. This, of course, is a general average figure. At the time of the enquiry before me, the return to the cheese milk producer was estimated at between $1.95 and $2.10 plus the value, which seemed rather doubtful in many cases, of whey returned for each 100 pounds of milk. If the average figure is one of general application, as I believe it is, it would seem to substantiate the contention brought forward by the Cheese Producers' Association that the price structure existing at that time did not permit a return to the farmer sufficient to pay for his cost of production and give him even a modest profit. As is true of other producers, there is great variation in the costs as between individuals who produce milk for cheese. It must be remembered that the figures I have quoted are averages for the whole Province.

There is also a difference in the way milk is produced for cheese between Eastern and Western Ontario. In Eastern Ontario, apart from the Cities of Ottawa and Kingston, there are no large markets for fluid milk, and there is consequently a much greater production of milk for cheese and condensary purposes. In Eastern Ontario this is largely a seasonal production. The practice is to have cows freshen in the spring and dry up in the fall. It was stated before me that the annual fluid production per cow on an efficient farm in Eastern Ontario would probably be about 6.000 pounds. In Western Ontario production is maintained over the year, including the winter months. Admittedly this increases costs, but also increases quantity, and there, I was told, on the average the annual production per cow would be about 8,000 pounds of milk per year. One witness had cows producing as much as 12,000 and 13,000 pounds of milk per year. He, however, would, I believe, be greatly above the average producer in Oxford County. The price ultimately realized for the cheese, of course, is not related to this distinction. Any additional profit must come out of the additional quantity of cheese produced.

By and large the producers have not maintained control over their product beyond the point of manufacture. I am told that the machinery for exporting cheese to the British market largely centres in the City of Montreal, and is operated by a Canadian firm and a British firm who have built up their businesses over a long period of time. Consequently the price realized by the producer of cheese milk is settled when his cheese is sold at a Cheese Board. While it was represented to me that Ontario Cheddar cheese was looked upon in Great Britain as a high grade article and was in effect in the class of luxury goods, any bonus accruing from this only accrues to a producer of cheese milk if it is represented in the price he obtains at a sale at a Cheese Board. As yet he has no effective control over the disposition of the cheese on the British market. It was, of course, to obtain some such control that the limited company which operates with the Ontario Cheese Producers' Marketing Board was set up, that is, the Ontario Cheese Producers' Association Limited. Its operations, however, have been on a very small scale partly, I am advised, through lack of capital. The following table sets out its purchases and sales from 1938 down to 1947:

ONTARIO CHEESE PRODUCERS' ASSOCIATION,
BELLEVILLE, ONTARIO
VOLUME OF CHEESE PURCHASES AND SALES

1938 to 1946 inclusive

	Purchases	*Sales*	*Pounds*
1938	$31,000.00	$34,000.00	213,000
1939	69,000.00	73,000.00	485,000
1940	82,000.00	87,500.00	500,000
1941		Not operating	
1942		Not operating	
1943	79,000.00	94,000.00	525,000
1944		Not operating	
1945		Not operating	
1946	107,000.00	118,000.00	600,000
1947	950,000.00	900,000.00	4,800,000
(Spring purchasing season)		(Sales reported to date)	

It is obvious that a much larger operation has been undertaken in 1947 with the revocation of most of the wartime controls. Neverthless, this Company, while it may occasionally have operated as a competitive factor in the domestic market, has not operated to an extent which would enable it to exercise any very effective influence on the price obtained at various Cheese Boards. I am told that the majority of the cheese producers are not willing to wait the length of time for their returns which would be required if this Company were to operate in a more substantial and more direct way on the British market. If this is the case, then, of course, the producers have very little ground for complaint. In my view the remedy lies entirely in their own hands, and it may be that until they are prepared to extend the operation of this marketing company to Great Britain, and, in effect, see if they can sell Ontario Cheddar cheese on the British market as a luxury product at a price commensurate with that sort of goods, the producers of cheese milk in Ontario have no proper cause for complaint. If they are not willing to take independent steps to insure that the prices received are truly competitive, they must accept the prices paid by the export firms alrady handling the business. I am told that the export firms functioning in Canada do not show any unusual or large scale profits. I have no information, however, nor have I been able to obtain any, as to the profits earned by their principals in Britain, and I do not know whether they are inordinate or not. It would seem obvious, however, that until the producers are prepared to test the matter out further, very little can be said as to the adequacy of the prices obtained.

While premiums, which will be discussed later, are paid for high quality cheese by the Dominion Government pursuant to the Dominion Cheese and Cheese Factory Improvement Act, it is obvious, I think, that if Ontario Cheddar cheese is to be sold as a high grade luxury product there must be a continuous and persistent effort to further improve quality.

It would appear from the evidence and from what I have been advised, that in many cases cheese factories in Ontario would benefit greatly by consolidation and modernization. By the Cheese and Cheese Factory Improvement Act, Chapter 13, Statutes of Canada, 1939, as amended in 1940, the Governor-in-Council may grant out of monies appropriated by Parliament for the purpose a sum not exceeding 50 per cent of the amount actually spent for new materials, new equipment and labour. utilized in constructing, reconstructing and equipping cheese factories, subject to certain further provisions as to cheese ripening rooms, proper insulation and refrigeration; and provided that such new factories replace two or more existing cheese factories.

Consolidation of Cheese Factories

In a notable address delivered by Dr. G. S. H. Barton. Deputy Minister of Agriculture for the Dominion to the Ontario Cheese Producers' Association in January of this year, he pointed out that from 1939 down to the beginning of 1947 in the Province of Quebec some 48 new amalgamated cheese factories were constructed pursuant to this Act. and that these new factories replaced 105 original factories. Forty of these factories were constructed as combined cheese and butter factories at an average cost of $12,451.88. The average subsidies paid on account of all amalgamated cheese factories in Quebec was $7,100.81, and the average cost worked out to $14,201.62. As I have noted above, Dr. Barton stated that 48 amalgamations had taken place, and at the time of his address in January, 1947, four more were under way. As compared with this, only two amalgamated cheese factories replacing four original cheese factories were constructed in the Province of Ontario. Neither of these new factories was constructed or equipped for the manufacture of any product other than cheese. The average cost of these factories was $13,173.88, and the average subsidy paid was $6,586.94. He stated that two amalgamations had been completed in Ontario; that six were under way at the time of speaking; and that in all only eight had taken place. It would appear that the cheese milk producers of the Province of Quebec realize their problem and are much more progressive in their attitude towards it than those in Ontario. It is recommended that the Ontario cheese producers should consider their condition and take advantage of this public assistance. as it undoubtedly assists in producing a much better quality of product.

It may be asked why such stress is laid on the necessity of amalgamation of cheese factories. While amalgamation of the smaller existing plants is most desirable from the standpoint of greater uniformity and improvement in the quality of the product, it should also be noted that amalgamation is also desirable in that it paves the way to lower cost of cheese manufacture. A survey of cheese manufacturing conditions in the Province as they existed in 1933 was made by the Economics Division of the Dominion Department of Agriculture. The results of this survey. which would appear to be equally valid to-day, indicated very clearly that the cost of hauling milk from the farms to the factory declined with each increase in size of factory. The more the volume per factory increased, the more was collective hauling substituted for individual hauling; and the larger was the volume of milk handled by each unit of hauling equipment. The decrease in cost resulting from more efficient use of hauling equipment was greater than any increase in cost resulting from lengthening the milk route. From this it would appear that a very considerable increase in the average size of factory is required before real efficiency in the use of hauling equipment can be brought about. By increasing the volume of milk going to each factory, not only is a reduction in the cost of milk hauling effected but there is a reduction in the cost of manufacturing the milk into cheese. It would appear that the main cause of high manufacturing cost is insufficient volume of business. The main hope of making worthwhile cost reductions in the processing cost lies in making substantial increases in the output per factory. Where the average volume per factory is relatively small, as in many parts of Eastern and Central Ontario, there is very definite room for considerable amalgamation. In these areas the small average volume suggests the need for amalgamation, while the fact that plants are close together indicates the possibility of it. To repeat, any possible increases in volume resulting from amalgamation would reduce the cost, both of milk hauling and of cheese making.

It is also worth noting that there is a definite connection between the lowering of manufacturing cost and the lowering of farm production costs. It is obvious that a larger amount of milk per cow and per farm probably results in lower production costs. The more farm costs are reduced in this way, the larger is the volume of milk from a given area. The larger the volume of milk, the lower will be the cost of transporting it and manufacturing it into cheese. As more milk is available there will be full load and full use of plant capacity. By reducing the farm production costs, therefore, by increased volume farmers are contributing to a reduction in the expenses of manufacture.

To the extent that amalgamation of factories actually occurs, the question as to the length of operating season is likely to become more important. It is obvious that an up-to-date larger-scale factory involves considerable in the way of overhead investment, and that efficiency in processing will require reasonably complete use of the plant over the whole year. On the other hand, in order that the factories may be more fully used, it will be necessary to have cheese producers continue supplying milk for a longer period of the year. As has been previously noted, this would involve considerable increase in production costs. The proper balancing of these two sets of costs is a problem which the cheese producers, particularly those in Eastern and Central Ontario, will have to most seriously consider in the future as amalgamation proceeds.

The importance of the foregoing will be realized when it is appreciated that the over-all price for cheese is inevitably determined by the price obtained for the exportable surplus. No matter what the cost of production in Ontario is, what the farmer gets for the milk he produces for cheese is determined finally by the price paid for cheese by those exporting it to outside markets. Unless the farmer can improve that price by improving quality, or can widen the spread between his cost of production and the price obtained for his cheese when sold for export, there is no way that I can see by which he can improve his income from the production of cheese milk. High quality, cheapness of production and more efficient marketing must be the goals towards which the cheese producer's attention are constantly directed.

Summary

I do not think that I should conclude these observations without quoting a short passage from Dr. Barton's speech to which I have previously alluded: As he said:

> "In the manufacture of cheese we have made substantial improvement in the quality of the product in recent years but we still have too large a proportion of our cheese which fails to meet requirements. We have improved the storage facilities in a large number of factories but we have stagnation, particularly in Ontario, in the character of the factories themselves. We have too many small factories, too many of them uneconomic units and inefficiently operated. There is only one solution for this condition and that is new factories on a consolidated basis wherever that is practicable. That is the logical means to make economic manufacture possible, to afford opportunity for first-class service, and to eliminate many of the present weaknesses. I believe, also that in such consolidation the possibilities of combination factories should be carefully examined and in many cases provision made in the plans for facilities through which diversion of milk to other purposes may be undertaken when such action seems desirable. This would add to the value of the investment, it would give the business flexibility, and it would provide security against absorption by any monopoly interest for a special purpose."

Something was made in the evidence before me of the differential in the cost of production between milk for the fluid milk market and milk for the manufacture of cheese. In view of what has been stated as to the conditions under which Ontario Cheddar cheese is produced and sold, a discussion of any differential of this sort would appear to lead nowhere as the factors which determine the return to the cheese milk producer are not directly related to his cost of production or to those governing other types of milk producers.

It is obvious that at the present time the return to producers of cheese milk is influenced to a large degree by the existing contracts with Britain. It was urged before me that if the producers in Ontario were given a free hand in the marketing of their product, they might obtain higher prices than those obtaining under the British contract. It should be remembered, however, that the British market has been the market which over the years has absorbed most of our surplus Cheddar cheese. If anything approaching a fair price is now being obtained, and it is I think impossible to say that the present price is unfair, it would seem to be good business for the producers of cheese milk in Ontario to take a price which now will in effect maintain and protect the market established in Britain over so many years. While it might seem reasonable to permit token shipments to other markets to keep Ontario Cheddar cheese before the consumers in those markets, nevertheless it must be the part of wisdom not to destroy the one substantial market which has already been developed by demanding at a time of crisis prices which are essentially out of line with those prices which would be obtained under more normal conditions.

A final word should perhaps be said in regard to the important place which the production and price of cheese plays in relation to the entire dairy structure. Even though the percentage of milk going into cheese is but a fifth to a quarter of the total produced, it is the price received for milk at the cheese factory that tends to determine the whole dairy price structure. If the cheese price fails, milk tends to be shifted from the cheese factory to the creamery or condensary. Such supply increases tend to cause a drop in butter-fat and condensary prices. If and when this happens, there is sure to be an attempt to break into whole milk markets. Thus unsatisfactory cheese prices tend to bring about uncertain dairy prices in general. It would, therefore, seem apparent that there is a very real responsibility on all those connected with the production and marketing of cheese in Ontario towards the whole dairy industry in the Province. This may well be a factor which might lead other branches of the industry to seriously consider the suggestions made before me for the pooling and marketing of all milk produced in the Province through an over-all marketing organization.

Mr. Entwistle has made a study of the position of the cheese producers and cheese factories. Comment has already been made on certain aspects of this study without direct reference. It is set forth in full in Appendix 29.

CHAPTER XI

Cream Producers, Creameries and Butter Production

Cream Producers

The Ontario Cream Producers' Association, organized in 1946, presented a brief to this Commission and gave evidence before me. It would appear that upwards of 76,000 farmers in this Province ship cream to creameries for manufacture into butter. The flow is not uniform, in that there is no quota to be met and hence natural variations in production are reflected in the deliveries of cream.

Wtih very few exceptions cream is a by-product on these farms, in that the herds of cattle kept are not dairy cattle but beef cattle or dual-purpose cattle, with low milk production, as compared with cattle used for the fluid milk supply.

As a matter of fact, the collection and sale of cream in many cases represents the extra labour of a farmer's wife, by which she receives a cash income to assist her in managing her home.

Notwithstanding the fact that cream production is essentially a side-line to other types of farming, Ontario is a very large producer of cream and butter, in the aggregate, and until rationing during the war years enjoyed a per capita consumption of 32 pounds of butter per year, which was higher than any other community in the world.

This enormous consumption could not be supplied by the domestic creameries, although approximately 30 per cent of all milk produced is used for butter-making, and this Province has been an importer of butter since 1915, the bulk of our requirements over and above Ontario production coming from the Prairie Provinces.

Efforts were made by representative cream producers to give an estimate of the cost of producing milk for skimming and producing cream for butter. In the brief of the Producers' Association filed, it was estimated that the cost would be in the vicinity of $2.54 per 100 pounds of milk testing 3.4 per cent butter-fat. This, converted to a price to the producer per pound of butter-fat, would be 74 cents per pound. As a rule five pounds of butter are recovered from four pounds of butter-fat, and since the spread to the creamery under the present price structure, as estimated by Mr. Entwistle, is approximately 7½c, a price of 74 cents per pound butter-fat to the producer means a price of 67 cents per pound of butter to the consumer.

In evidence before me, however, it was admitted that it was a very difficult matter to estimate cost of production so far as cream was concerned. It must be obvious that one would have to take into consideration the whole farm operation and try to allocate a fair proportion of costs and returns to the cream production. Without a detailed study of many farms over a period of years it would not, in my opinion, be possible to get any estimate worthy of consideration.

Generally speaking, I subscribe to the view of the cream producers that each product should stand on its own feet and that the producer should receive at least his cost of production where such is the result of efficient operation for each necessary product. At the present moment, however, it is not possible for me to say whether or not, on the average, a producer is getting his cost of production for cream. Prior to May 1st, 1947, the producer received 40 to 42 cents per pound butter-fat from the creamery and 10 cents per pound butter-fat by way of federal subsidy. Since that date the subsidy has been cancelled, and price ceilings removed, so that he is now receiving approximately 51½ cents per pound butter-fat all paid by the consumer.

There are other provinces in Canada with substantial exportable surpluses and other countries as far away as New Zealand, who are ready and willing to ship butter into Ontario for this price and some times at a much lower price. The Ontario cream producer, in my opinion, must be subject to these factors and cannot expect to receive a higher price than that prevailing in the export market.

It seems to follow, therefore, that if the cream producer is to improve his position he must,

(a) Improve the quality of his product to insure the highest prevailing price;
(b) Improve his methods of production to reduce cost;
(c) Eliminate waste and duplication in transporting the cream;
(d) Do what he can to eliminate wasteful methods and unused plant capacity in the creamery; and
(e) Take steps to insure that he gets the maximum competitive price for his butter-fat.

Before dealing with these five points, it should be drawn to attention that, regardless of the price of butter-fat, there is bound to be a substantial production of cream available for churning. Apart from those farmers essentially engaged in raising cattle for beef, which must of necessity produce quantities of cream, skim milk is such an essential feed factor in poultry and hog raising that cream must be produced.

Nevertheless, there is a wide-spread belief held by cream producers that, prior to recent price increases in butter, the cream producers received proportionately less for each 100 lbs. of milk produced than producers of milk for fluid consumption, cheese and manufactured milk products. It may be that this belief, although difficult to justify, has been a factor in the decline in butter production in Ontario which is shown later in this chapter.

It may be expected that during periods when the price of butter-fat is depressed, the amount of cream reaching the market for butter may decline, but if the market for hogs and poultry is at a reasonable level, this would tend to prevent a reduction in the volume of cream produced and available.

It should further be remembered that, while Federal tariff-policy may afford protection to the Ontario cream producer by excluding low-priced butter from other countries with a large exportable surplus, the Province of Ontario has no power to exclude the produce of other Provinces of the Dominion, and there is certainly a limit to what the consumer can be called on to pay to protect the farmer.

Quality of Product

Cream is graded by Sec. 15 (2) (a) of the Regulations filed under the Dairy Products Act (Ontario) 1938 Cap. 7. The basic grade is "First Grade Cream" and of course the price for this grade depends on the price received for wholesale creamery butter. "Special Grade" Cream, as defined, provides for a premium of one cent per pound butter-fat over "First Grade." "Second Grade" Cream is to be paid for at a rate of three cents or more below "First Grade." No other cream shall be used for butter-making.

W. J. Wood, Esq., of Alliston, Ontario. President of the newly-formed Cream Producers' Association, had this to say in evidence before me (Vol. 38, pp. 5113-5114):

> "I think to-day that cream is being produced in a great many instances which is not really up to the quality it should be, having regard to the care taken in producing it. To-day during the winter months, when men are milking four or five cows and they have to separate that milk, the separator should be kept in a warm place. Many farmers have not all the facilities they need, and as a consequence they bring that separator just as far into the barn as they can, or into the cow stable, and some of them even separate it right in the cow stable—even the separator is stored among the odours of feed and from the cows —and it cannot be of the best quality. That is one of the things which is going to help the farmer—that is when we get inspection—to improve the quality of the butter."

At the present time there are no standards set for cream producers with respect to sanitary conditions, and apparently the price differential of four or more cents per pound between Special Grade Cream and Second Grade has not been a great enough spur to ensure real effort by many producers to get the top price.

It is encouraging to see the officers of the new Association recognizing this and taking steps to help their members to improve methods of production to get a greater return for their work.

Methods of Production

Since cream production is essentially a side-line business, the same care and study has not been devoted to production as in the case of many whole milk producers. It seems beyond doubt that many cream producers can so increase their volume of production by improved and modern methods as to materially lower their present unit cost, and again the Cream Producers' Association, in conjunction with the Dairy Branch of the Ontario Department of Agriculture, should be of great assistance in achieving this end.

Waste in Transportation

On the average, a cream producer in Ontario will ship his product to a creamery eighty times annually—or once every four or five days, the producer paying the cost of transportation as one of his production costs. Cream transportation has always been notoriously wasteful. In March of 1944, the Services Administration of the W.P.T.B. reported that in Ontario, on the average six cream collections were being made simultaneously in every cream producing township except the far north, and in one township there were fourteen simultaneous collections and in another, in addition to trucks operated by a creamery, 29 other cream collecting trucks were operating.

In 1938, Mr. Alex Stewart, M.A., of the Ontario Agricultural College, made a survey entitled "Economic Factors in Cream Collection in Ontario," and I quote the following passage from his study:

> "Since the cost of collecting cream makes up some 40 per cent of the total cost of manufacturing butter, any method of reducing this cost should mean a worthwhile saving to the farmer.
>
> "In the Township of McGillivray (Middlesex County) 11 creameries were collecting cream in the spring of 1938. After allowing one truck on each road, there remained an estimated duplicate or waste mileage of 218 miles every time the cream of the Township was collected. On the basis of 80 collections made per creamery per year, this Township would show an estimated waste of approximately 17,500 miles per year due to overlapping in collection."

That the conditions described as existing in 1938 and 1944 are still unchanged is borne out by the evidence of officers of the Cream Producers' Association before this Commission. One of them had this to say:

> "For a long time there has been quite a feeling that we have had considerable duplication in the collection of cream. It is felt that through some intelligent organization and intelligent understanding between the operators and the producers, perhaps some material savings could be made. You cannot attend a meeting of cream producers but that they protest about the number of cream trucks which travel down the road. They will, also, have to recognize that they are partly to blame since they patronize different creameries. There will have to be understandings both ways."
>
> (Quoted from evidence of V. S. Milburn, Vol. 38, pp. 5098-5099.)

The producers individually and collectively must realize that they have no right to preserve this wasteful and costly duplication in order to satisfy their uncontrolled preferences and prejudices with respect to the creameries they choose to patronize, and at the same time claim high transportation costs as a part of production expense to be recovered from the consumer. I think the officers of the Association are well aware of their responsibilities, and it may be that the new Association will be able to accomplish much in eliminating this evil. Anything they are able to do will tend to correct the disparity between the price of fluid milk and the price of milk for cream and butter.

In some markets much of the cream is brought to the creamery by the producer. This is particularly true where the creamery is located in a good urban market city, e.g. London. The farmer combines a trip to town for various purposes, with the delivery of cream, and this of course means a very modest amount is to be charged to cream transportation. In addition it has been found that the cream usually arrives in better condition and consequently secures a higher grading than if it arrived by independent transport.

The second most satisfactory method of transportation has been by creamery-owned vehicles. Here there has been definite rationalization of routes with lowered costs resulting.

The least satisfactory has been by collecting stations where large creameries such as Swifts, Canada Packers, etc., accumulate large quantities of cream for ultimate shipment to processing plant. It is clear from studies made that the quality of the cream deteriorates in direct ratio to the length of time it is in transit, and hence the cream sent via collecting stations has the poorest chance of securing a first-grade and little, if any, chance of a Special Grade. Certain facilities, however, that the large creamery, operating through a collecting station which is frequently a country store, offer to the producer, attract producers to this type of transportation.

Waste Creamery Capacity

This factor will be dealt with in the section headed "Creameries".

Insuring Maximum Competitive Price

The Cream Producers' Association is at the present time taking steps to formulate a marketing scheme under the Farm Products Marketing Act. 1946 (Ontario). Under this scheme marketing of cream would be done by a negotiating committee, whose responsibility would be to settle agreements for minimum prices, forms of contract, conditions of sale, weighing and testing, transportation and other related matters. The scheme also contemplates local boards being set up in the various cream producing regions of the Province to assist in implementing the marketing plans. While the successful operation of such a scheme must yet be demonstrated, I feel that this organization may be able to do a considerable amount to assist the farmer in recovering the maximum possible share of the consumer dollar and perhaps, by exercising a certain amount of discipline over its individual members and reducing the number of bargaining agents, bring about many of the needed reforms in the marketing of this product.

It should be pointed out that cream, unlike fluid milk, may be susceptible to a marketing scheme under the Farm Products Marketing Act, in that it does not require daily delivery to the processing plant. Ordinarily it may wait four to five days and still be Special Grade sweet cream,—and even sour cream will make good butter. Thus local boards are not pressed for time in the same way that a local board attempting to market extremely perishable fluid milk would be.

In the interests of the producer, it is my view that the proposed marketing scheme should be given full support and encouragement, so that the Producers' Association itself may find methods of eliminating the waste and loss resulting from present out-of-date and inefficient methods of production and marketing.

In addition to possible benefits under this scheme, it is well to remember that the successful operation of a larger number of co-operative creameries would do much to ensure recovery of the maximum competitive price.

2. *Creameries*

The Ontario Creamery Association, organized in 1917, is an unincorporated Trade Association, having in its membership 200, or 78.93% of the 279 creameries licensed to do business in the Province of Ontario in 1945. The members of the Association produced 87.38% of the creamery butter produced in the Province in 1945. Representatives of this Association filed a brief for my assistance and gave oral evidence before the Commission, and I am satisfied that they were in a position to properly represent this branch of the dairy industry. In addition, financial statements and detailed questionnaires were received from creameries generally, and an analysis of their financial positions with respect to cost and profit has been made by Mr. Entwistle. His full report is attached as Appendix 23.

There are three headings under which I wish to discuss the position of the creameries:

(a) Plant capacity, Volume of Production and Consolidation.
(b) Single and Multiple Operations.
(c) Cost and Profit Position.

While there are other headings which might be of interest, such as grading, sanitary standards, licensing and checking, I feel that there is no major deficiency in the administration of these matters by the Dairy Branch of the Ontario Department of Agriculture. I had the benefit of a brief and evidence from Mr. H. E. Lackner, Director of this Branch, and there can be no doubt that creamery butter produced in Ontario and sold by standard grades is an excellent product and merits the full confidence of the consumer.

(a) *Plant Capacity, Volume of Production and Consolidation*

(i) *Plant Capacity and Volume of Production*

As stated before, the production of creamery butter in Ontario has steadily declined since 1939. This is significant, not only because of the effect on the Ontario producer, processor and consumer, but also because the same trend has not been true of Canada as a whole. The comparative figures are as follows:

Total Annual Production of Creamery Butter 1939-1946 *Inclusive*

	Ontario lbs.	Canada lbs.
1939	88,010,276	267,612,546
1940	87,278,149	264,723,669
1941	86,242,850	285,848,196
1942	81,025,298	284,591,372
1943	82,023,800	311,709,476
1944	75,074,100	298,777,300
1945	77,630,000	293,811,000
1946	68,954,000	271,366,000

Thus, while Ontario production in 1946 was only 78.3% of 1939 production, Canadian production in 1946 was 101.03% of 1939 production.

In the same period the number of producers of cream for churning in Ontario declined from a high of 90,000 in 1939 to approximately 76,000 in 1946, and the number of licensed creameries in Ontario declined from 337 to 286. The decline in the number of creameries has been caused by small marginal plants going out of business, particularly in Eastern Ontario, and to the extent that the available cream supply has been directed to other creameries represents a worth-while consolidation. Unfortunately the decline in the number of creameries has been exceeded proportionately by the decline in cream production.

Studies made by the Commission Accountant indicate that at present. Ontario creameries are on the average operating at less than capacity, and in some cases as much as 50 per cent below full operation. Others, however, are operating at full capacity, 48 hours a week, all year round. It has not been possible to estimate the actual loss in capacity of production by plants, but whatever it is, it represents a dead loss, in overhead, which must be absorbed in ultimate cost of production.

Similarly, volume of production, as shown by the Accountant's report, is of the utmost importance in keeping unit cost to the lowest possible level. How unfavourably Ontario compares with other provinces in this respect, will be seen from the following figures:

Approximate Average Production, in lbs., per Creamery in 1946

Ontario	240.000 lbs.
Saskatchewan	780.000 lbs.
Alberta	410.000 lbs.
Manitoba	455.000 lbs.

It must be obvious that Ontario is suffering from too many small plants, each duplicating building and administrative overhead costs, and that steps must be taken to stimulate production to the point of maximum use of plants and, wherever possible, to encourage consolidation of plants with a view to substantially increasing the average production per plant.

Attention is directed to the comparison of net profits to creameries, having regard to the volume of their sales, as set out in Exhibit "B" to the Accountant's report. It may be thought that the fact that net profit percentages appear to decline as volume of sales increase, is evidence against the economy of large-scale operation. This is not the case, however, since it is cost of processing per unit that is important. Every study made of this aspect confirms my view that as volume of production increases cost per unit decreases.

(*ii*) *Consolidation*

Reference has been made to consolidation of plants as being a desirable policy in order to reduce unit cost of processing. In this connection I have quoted elsewhere from an address of Dr. G. H. S. Barton, Deputy Minister of the Dominion Department of Agriculture made to the annual meeting of the Ontario Cheese Producers' Association in Toronto on the 7th January, 1947. Dr. Barton's remarks apply with equal force to creameries, and it should be pointed out that not a single application has been made in the Province of Ontario for financial assistance under the Provincial Consolidated Cheese Factories Act, R.S.O. 1937 Cap. 87, although generous financial assistance is available to milk producers "who desire to erect a modern dairy plant to take the place of two or more smaller ones." It is realized that this Act is primarily applicable to cheese factories, but it is suggested that without amendment it is equally applicable to combined cheese factories and creameries, and with minor amendments to creameries only. The initiative should be taken by the Ontario Cream Producers' Association, either alone or in conjunction with the Ontario Cheese Producers' Association, to take full advantage of this legislation.

(*b*) *Single and Multiple Operations*

Five out of every six creameries in Ontario have a second or more lines of business which include the following, in order of importance: eggs, poultry, fluid milk, whey butter, ice-cream, cheese, condensed or powdered milk or buttermilk and sweet cream.

Repeated studies of this problem in every major dairy country in the world have emphasized the importance of diversification of enterprise in order to reduce unit costs to the lowest level and to take advantage of fluctuations in market conditions.

The Commission Accountant, whose full report on this matter has already been referred to, estimates the average rate of profit of those concerns engaged exclusively in the production and sale of butter, at 1.26% of sales, and the average rate of profit of concerns with a diversified business at 1.97% of sales. In other words, the diversified enterprise is employing diversification as a substitute for volume, to reduce unit costs of processing and handling to the lowest level.

(c) *Cost and Profit Position*

The average cost and net profit realized in the manufacture of creamery butter for the fiscal year preceding October 1, 1946, is clearly set out in Table 6 to Mr. Entwistle's report. For convenience that table is set out below:

Manufacturing Cost of Creamery Butter
for the Fiscal Year Next Preceding October 1, 1946

	%	Cents per pound
Sales	100.00	35.25
Cost of:		
Churning cream and ingredients	82.51	29.09
Hauling	1.80	.63
Containers and packages	1.38	.49
Material cost	85.69	30.21
Cost of:		
Processing, labour	6.05	2.13
Selling, administrative and general salaries	1.85	.65
Labour cost	7.90	2.78
Cost of:		
Repairs	.85	.30
Depreciation	.90	.32
Facilities	3.40	1.20
Services cost	5.15	1.82
Total cost	98.74	34.81
Net profit before taxes	1.26	.44

I will only comment on two aspects of this table, (a) that over 82% of the sale price of a pound of butter goes to the producer, and (b) that the net profit margin before taxes is approximately 1.26%. Thus the processing margin is a small percentage and any savings made will of necessity be fractions of one per cent. It follows that the only way to achieve sizeable savings is by greatly increasing the average volume of production per plant.

Earlier in this chapter I drew attention to the Saskatchewan average plant production as being in excess of three-quarters of a million pounds annually, as compared with Ontario's quarter million pounds. I would also note the New Zealand average of over one million one hundred thousand pounds annually and the fact that in that country the bulk of production of creamery butter comes from factories which also produce large quantities of cheese.

Mr. Entwistle has analysed the financial position in detail in his report, and in view of the fact that there do not appear to be any glaring inequities, I would direct attention to this report for further observations.

Summary

Briefly, the cream and butter aspect of the dairy industry is largely dependent for improved financial return to the producer and minimum price to the consumer on steps that lie within the power of the producers themselves.

I am of opinion that full support should be given the new Cream Producers' Association in their efforts, and that every opportunity should be taken to reduce the number of creameries and increase the volume of production per plant.

CHAPTER XII

The Concentrated Producers and Manufacturers of Concentrated Milk and Their Position

I was advised during the hearing that there are approximately between 13.000 and 14,000 farmers in Ontario who produce milk for concentrated milk factories. Representations on their behalf were made through a trade association known as the Ontario Concentrated Milk Producers' Association, which, it was stated, has a membership of approximately 12.000 producers located chiefly in Southwestern and Southeastern Ontario. It was indicated that there were probably between 1.000 and 2.000 other producers of milk for concentrated purposes who are not members of the Association: but in view of the large number represented I assumed that the Association could reasonably speak for all the producers in this field.

The Association is made up of local branches, and the list of those given me would indicate that the farmers producing milk for this purpose are concentrated in Western Ontario in the Counties surrounding Oxford and south thereof: in Eastern Ontario in the Kingston area, and to a certain extent in the eastern part of the Ottawa Valley. This Association, as in the case of associations representing other sections of the producers, is maintained by fees collected from the farmers by the factories on the weight of milk sold. The condensaries manufacturing the products of these producers number something in excess of thirty. In addition, some of the larger distributors of fluid milk, like Bordens and Silverwoods, engage in the condensation and evaporation of milk.

Producers and Their Cost Position

Except for a somewhat limited portion of Western Ontario, the most of the farmers producing milk for the condensaries supply the major part of the milk during the so-called flush season. There are striking variations between the amount available, say, in the month of June, and the amount available to the same factories in December. This is, of course, a factor which increases cost of manufacture. On the other hand, it should tend to reduce the producer's costs, as he does not have to go to the expense involved in maintaining a level supply of milk over the whole year. I see no object in repeating the observations made in the general Producers' chapter on producers' costs. Speaking generally, however, the same economic factors operate in this field as apply in the fluid milk field. The financial return to the producer should reflect the demand for the manufactured product and the prices obtained for it. There was some question in the mind of the Producers' Association as to whether this was actually the case. That this doubt has some justification is indicated by Mr. Entwistle's study of the profit position of some of the principal manufacturers of concentrated milk, which is attached as Appendix 24 to this report. In the brief filed before me by the Concentrated Milk Producers' Association, their general cost of production of milk was estimated at $3.00 per hundredweight. In the examination of the cost position of the concentrated producers made on behalf of the Commission, the general average figure for the whole province was $2.93 per hundredweight of milk produced. This, of course, includes an administration allowance, which the Association's figures did not. The details of it are as follows:

AVERAGE COSTS FOR THE PROVINCE OF PRODUCING MILK FOR CONCENTRATED MILK PRODUCTS

Concentrates	$ .73	
Hay	.46	
Silage	.20	
Pasture	.24	
TOTAL FEED COSTS		$1.63
Dairy Herd Labour		.92
Depreciation		.17
Hauling		.12
Miscellaneous		.29
GROSS COST		$3.13
CREDITS:		
Milk used on farm	$ .09	
Manure	.20	
Cattle sales less cattle purchases and inventory adjustments	.29	
		.58
AVERAGE NET COST		$2.55
ADMINISTRATION ALLOWANCE		.38
TOTAL COST INCLUDING ADMINISTRATION ALLOWANCE		$2.93

It should be remembered, of course, that this is an average figure for the whole province. It may well be asked why, if a large part of this production is on much the same seasonal basis as is production for cheese purposes, the increased cost? The evidence before me would indicate, however, that by and large the farmers producing for this market do a greater amount of special feeding with purchased grains and concentrates than is done by many of those producing for cheese. It is also partly the result of a growing tendency on the part of Western Ontario producers to supply this milk in fairly equal quantities throughout the year. It was stated in the Association's brief that the average return at the time of the hearing was about $2.25 per hundredweight. It must, of course, be realized that at that time the industry was operating under price ceilings except as to the competitive export business. These ceilings have since been removed, resulting, I believe, in an increase in both the price of the finished product and the price paid to the producers. I am advised that the recent increase to the producers is 12 cents per hundred pounds. If the figures I have quoted are any guide, the producer is still far from receiving his cost of production.

Essentially the problem confronting the producer of milk for concentration is very closely related to the surplus fluid milk problem which has been discussed in detail in the general Producers' chapter. The Producers for cheese by and large control the manufacture of their product, but stop short of marketing it. The Concentrated Producers have by no means reached that position, and are largely in the hands of their manufacturers at the present time. If some of the suggestions made in the general Producers' chapter leading to the erection of producer-owned concentrating plants are followed out, the competition thus afforded will, in my opinion, in great measure solve many of the difficulties facing the producers in this special group. One has only to look at the submissions made by the Concentrated Milk Producers' Association to realize that many of the problems with which they are confronted are similar to those of the fluid milk producers. They, like the fluid milk producers, are somewhat dissatisfied with their butter-fat ratings, and made the very practical suggestion that representatives of the Association should be allowed to check on the ratings given the individual producers by the various factories. To cite another example, if consideration is given to the transporting of milk to condensaries, many of the matters which are dealt with in the general chapter on transportation apply with equal force to this group of producers.

While the problems of the two groups are in many cases similar, it is, I think, generally true to say that thus far the problems of the concentrated producers have not been as effectively dealt with. Obviously, this is the result of the fact that, as a group, they are not as powerful. By and large, the condensaries are in a stronger bargaining position with their producers than are the distributors of fluid milk with theirs. In saying this I do not criticize the producers. The very nature of the business of condensing milk is entirely different from that of distributors, who must have a day-to-day supply of fluid milk for the consumers. If necessary, the manufacturers can wait.

The Transportation Problem

One of the chief complaints made by the Concentrated Producers is that they are charged a flat rate for the transporting of their product irrespective of their distance from the factories. The answer of the plants to this is that they think this basis of charge fairer to everyone concerned. From their viewpoint this practice assists in assuring adequate supplies of milk. While the cost of transportation is charged to the producer by the factory, the contracts appear to be made between factory and trucker, and the producer is thus in a position where he is asked to pay for something over which he has very little control. In my view the general recommendations made in the Transportation chapter in respect of fluid milk would apply with equal force to the transporting of milk to the concentrator factories. This view, however, is not shared by the Producers' Association. It is said that the practical difficulties of testing and weighing the milk at the farm are too great to be overcome. I must say I find it difficult to credit this. In my view, as previously expressed, thought directed towards solving these difficulties would pay substantial dividends. Insofar as producers for this market are denied the advantages of co-operative trucking and are subject to the onerous licensing provisions presently in force, I would make the same recommendations with respect to them as are made generally with respect to the transporters of fluid milk. These are contained in the general summary of conclusions and recommendations at the end of this report.

Price Fixing to Producers

With respect to the administration of the Manufacturing Milk Board, it would appear that up to 1942 the price paid the producers was calculated on the basis of a formula which was used by the Manufacturing Milk Board from 1935. The formula price as used was a composite value for milk determined on the basis of the market quotations for butter and cheese plus a premium to cover the value of solids-not-fat in the milk. In 1942 this formula was abandoned, because what had been considered the normal relationship between butter and cheese was thrown out of balance by price changes resulting from war conditions.

It is noted that this formula established a minimum price, and in fairness to most of the manufacturers, I have been advised that the prices paid by them in many cases were in excess of these. This was particularly true of the prices paid during 1945 and 1946. With the coming of price control maximum prices were fixed for the manufactured products. This, of course, had the effect of indirectly controlling the producer price, although this price was not specifically dealt with under the dairy orders of the Wartime Prices & Trade Board. It should be noted, however, that from December, 1941, down to the end of September, 1946, producer subsidies in varying amounts were provided by the Dominion Government.

I am told that in 1945 an application was made to the Milk Control Board to review the minimum prices established for producers, but that after a somewhat lengthy hearing it was decided not to increase these. As I have stated above, while there is no formal order in existence at the present time, the manufacturers of concentrated milk have apparently agreed to increase the price prevailing to the extent of 12 cents per hundredweight. I believe this is an arrangement which is to be reviewed from month to month.

By and large it cannot be said that the Milk Control Board, through the Manufacturing Milk Board, has intervened in this branch of the industry to anything like the extent which it has in the fluid milk field, and it would appear that in future the Board should more actively arbitrate between the producers and manufacturers as to producer prices. If this is to be effective such arbitration can only be based on a full and continuous knowledge of producer costs and of manufacturing costs and profits. It has not been suggested to me in the evidence or in anything I have been able to discover that the Manufacturing Milk Board has had this information, which in my opinion is essential to its dealing properly with this important matter.

Marketing Scheme

It is interesting to note that the Concentrated Producers, more than any other group, emphasized the value to the producers in Ontario of an over-all marketing scheme. I have previously quoted their resolution in this respect in the Producers' chapter. Such a scheme would possibly solve the problems of this group of producers to a greater extent than almost any other group in the producing end of the industry. In my view, however, as I have already said, when the problem of surplus fluid milk is considered the advantages of a general marketing scheme to producers as a whole appear to be pronounced. I would suggest that the possibility of working out such a scheme be investigated without delay.

Consumer Prices, Profits, Etc.

It is significant to note that in any representations made on behalf of the Concentrated Milk Producers' Association they agreed that it was unwise and undesirable to fix a price at the consumer level for the manufactured product resulting from their milk. As will be seen when the situation of the manufacturers is discussed, milk is concentrated in Canada chiefly in the Provinces of Ontario and Quebec, and the position of the companies, insofar as costs are concerned, must be carefully weighed as between the two provinces if it is desired to retain the advantage of the processing of concentrated milk within Ontario through existing facilities. While up to the end of 1946 there has been a very large demand for concentrated milk products for export, if the experience of the last war is any guide this may well now be on the downgrade. This is emphasized in Mr. Entwistle's study in Appendix 24. and would appear to be already in process. As Mr. Entwistle points out. it is already some 24 per cent less in the first quarter of 1947 than for the corresponding period in 1946. It must be remembered also that in the domestic market very keen competition is brought to bear in the industry by the co-operative manufacturing carried on in British Columbia and Alberta: and that freight rates to the Western Provinces are a considerable factor in determining the prices to be charged in the domestic market. These are all considerations which must inevitably affect the return to the producer. It cannot be said. however, that it is in the interests of the producer or the public at large that the manufacturer of these products should be allowed in any given period of time to accumulate strikingly high profits at the expense of the producer. This situation will be discussed later. but if it occurs. as it appears to have occurred in the period under review, there is a very strong case for producers asking that they be given a reasonable share of this benefit.

Manufacturers

Mr. Entwistle's report deals with the situation in respect to the manufacture of concentrated milk products. While I propose to deal with certain general tendencies which he notices. there is no object. in my view. in repeating what he has said. since it is available in Appendix 24.

Looking at the over-all study made by Mr. Entwistle, it would appear that the financial position of the industry is not only extremely healthy at the present time but has been very greatly improved in recent years. It must be remembered. of course, that this study presents the general average picture. The financial results differ markedly from firm to firm. not only because of variations in the scale of operations. but also depending upon the extent to which the total business is divided between domestic and export sales, and between one type of concentrated product and another. As appears in the report. while the domestic price ceilings were in operation most firms producing evaporated milk incurred considerable loss on the domestic business. On the other hand, in most cases a substantial profit was made in the domestic market in respect of the sales of condensed milk. The general financial result is further affected by the manner in which the different types of business are divided as between provinces. For example. in certain cases certain products on which satisfactory profits were available have been manufactured in the Province of Quebec. whereas other products designed for the less remunerative domestic market were produced in Ontario plants of the same companies. This practice makes it extremely difficult to determine the extent of over-all profit or loss on the purely Ontario business of some of these concerns. This is still further complicated by the fact that some of the firms concerned are branches of parent companies with headquarters in Great Britain and the United States. Because of the variations in the type of product manufactured and the markets catered to. it is fairly obvious that the various members of the industry may in practice find considerable difficulty in agreeing upon prices which they can afford to pay producers. This may have some significance when it is considered that none of these manufacturers saw fit to make any submissions or voluntarily to give any information to the Commission. It was necessary to request all the information obtained.

As appears in the report. the various costs incurred by the manufacturers of condensary products have increased substantially since the year 1939.

At the same time the increased volume of demand for these products has apparently made it possible to offset these cost increases, and indeed to leave the firms concerned in a very much stronger financial position than they were at the beginning of this period. It should be realized, however, that if demand diminishes, and particularly export demand, as it seems to be doing, this situation may not continue. Obviously any decrease in volume of production very materially increases manufacturing costs. It may well be that after a number of lush years the industry is now facing somewhat more difficult times. This tendency toward pronounced changes in the situation indicates the necessity for continuous study on the part of the Milk Control Board, both as to producer costs and manufacturing margins.

In view of Mr. Entwistle's conclusions, it may well be that consideration should now be given by the Manufacturing Milk Board to the problem of producers' prices. It would appear desirable that the powers of the Board to arbitrate prices between producers and manufacturers be clarified and clearly laid down. It may well be that, in view of the present financial position of the manufacturers, minimum producer prices approximating their present cost of production can be established. It is impossible to say this dogmatically as a result of Mr. Entwistle's study. The difficulty in this connection arises from the fact that many of the principal manufacturing concerns in Ontario are branches of larger organizations outside this jurisdiction and complete consideration could not be given to their affairs. It would seem desirable that minimum standards of accounting, together with sufficient information as to overall operations, should be established by the Manufacturing Milk Board and be at all times available to it. It is equally desirable that there should be a long-term study of Concentrated Producers' costs in the possession of the Board. At the moment all I think that can be fairly said is that it would appear from the examination that has been conducted that the producers are not at the moment receiving their full share. In saying this due consideration must be given the possibility of the costs of manufacturing outside Ontario and of the value of the present industry to the producers and public in this Province. It may well be, as I have said before, that the salvation of the Concentrated Producers is in their own hands and that co-operative manufacturing by them would carry them a long way towards solving their basic problem, which is to obtain their fair cost of production plus reasonable profits.

CHAPTER XIII

General Conclusions and Recommendations

The Milk Control Act was originally passed to relieve a state of crisis which existed in the production and distribution of fluid milk in the Province in the year 1934. Methods propounded to meet this crisis have grown into a species of control maintained long after the emergency has ceased to exist. If it were possible to disregard this development, an arrangement where the producers of milk in this Province were organized in a marketing authority with power to direct the disposition and use of milk for whatever purpose seemed appropriate, would seem the best solution of their difficulties. As I have suggested, this might well be modelled on the present British scheme, which is in essence an organization of the producers themselves. But as I have previously indicated, the producers as a class, apart from some such comprehensive organization, are not able to protect themselves in bargaining with the distributors. If they were, I would be inclined to the opinion that the full play of competitive forces would reasonably protect the consumer in respect of distribution and would in the long run produce a much more economic and better organized system in the industry as a whole. Practically speaking, however, the producer organizations are not strong enough at the moment to fend for themselves alone. No over-all marketing organization of producers exists in the Province of Ontario. I must deal with the various factors as they exist at the present time. It would, therefore, seem essential at the present to maintain the existing controls.

The effect of the operation of the Milk Control Act since 1934 has been to remove most of those competitive pressures which ordinarily operate in respect of private business. In doing this, it has not substituted that full measure of public control which would seem to be the necessary alternative. In the result, therefore, particularly under inflationary or semi-inflationary conditions, the consumer has suffered. Instead of having the benefits of the operation of one principle or the other in the industry, the general public, in my view, have had some of the worst results of both. At the present time fluid milk as produced and sold in Ontario is, for practical purposes, a standard article sold at a fixed price. The only real measure of competition left among the distributors has been that competition in services, which is probably the most wasteful and extravagant form of competition that exists. What should be done at the moment would seem to me to be the taking of necessary measures to re-introduce some real and effective competition in the distributing end of the industry; and, for the protection of the producers, to continue the existence of the Milk Control Board. Its powers, however, should be clarified and enlarged. Under the present circumstances it is not sufficient to allow the industry to regulate itself at its own free will. There is an obligation on the Board to bring pressure to reduce waste and duplication, and to see that the interests of the three groups which are vitally concerned in the industry, namely, the producers, the distributors and the consuming public, are each reasonably protected and considered in a more definite and effective way than in the past twelve years.

While the earlier period of the Milk Board's operations may be thought of as an emergency period during which the central objective was to bring order out of chaos, the time has now arrived when the general objectives of the Board should be greatly enlarged. The basic reason for its continued existence must be its success in obtaining increased efficiency in milk production and marketing.

In respect of the Milk Control Board, therefore, certain specific recommendations are made herewith; others will appear as incidental to recommendations made under other heads.

Before making these recommendations, however, there is one other matter that should be mentioned: Sections 4 and 13 of the Milk Control Act give the Board various powers. Some doubt has been raised by the law officers of the Crown as to the power of the Board to fix prices under these sections. A perusal of the sections undoubtedly affords a reasonable basis for the doubts expressed. Without expressing an opinion on the Board's powers under the present statute, it should be pointed out that it casts a great and, in some measure, unfair responsibility on government to ask it to fix prices in a private industry, in the general administration of which it has in effect no decisive voice. The only justification for such exercise of authority would appear to be some infringement of the public interest. Insofar as price fixing is concerned, in the first instance the basic responsibility for the determination of prices would seem to rest on the industry itself. If, however, it is impossible for the parts of the industry to agree, then in dealing with a vital food such as fluid milk it may be desirable that an administrative authority such as the Milk Control Board should have the right to arbitrate between the various interests, and to determine an arbitrated price between the component sections. Similarly, if a price arrived at by the industry is against the public interest, paying attention to the interests of the producers, distributors and consumers alike, there may be responsibility on government to intervene in respect of the interest adversely affected. It is desirable also that the administrative body dealing with the problem should be able to advise the final authority on a sure basis of knowledge and accurate information. To date there has been no consistent effort to study the costs and profits of either the producers or the distributors. For example, at the time of this investigation such a fundamental fact as the ratio of wholesale to retail sales in the distribution of fluid milk was not available in the records of the Milk Control Board or the statistics branch of the Department of Agriculture. A sample study had to be made on behalf of the Commission.

I therefore recommend,

As to Price Fixing:

(a) That the Milk Control Board commence and continue the collection and study of representative cost data in respect to producers. Detailed suggestions as to how this might be done are contained in Appendix 28.

(b) That it should also undertake a continuous collection and study of the cost and profit position of the distributors. It may be that the powers of the Board under section 15 as at present constituted are sufficient for this purpose, but if not they should be reconsidered and clarified.

(c) That such additions to the staff of the Milk Control Board as are necessary to carry out (a) and (b) be considered.

(d) That sections 4 and 13 of the Milk Control Act be revised to clearly give the Board authority to arbitrate a price for fluid milk as between producers and distributors, and in cases of necessity as between distributors and consumers.

(e) Further, that the power of the Board be made clear to enable it to ultimately determine a price for fluid milk either to the producers or to the consumers if the prices obtaining are against the public interest, as determined by the rights and interests of the producers, the distributors and the consumers, with the result that in practice—

(i) The price of fluid milk at the consumer level be not agreed to or fixed in ordinary circumstances. The power should be a corrective one only, and

(ii) That prices paid by distributors to producers be fixed or agreed upon as heretofore and that such prices be ordinarily fixed on the basis of delivery at the farm unless other methods are successful in eliminating duplication and excessive cost in transportation from farm to dairy.

As to Co-operatives—

(f) That section 11 of the Milk Control Act preventing rebates by distributors to customers, and which in effect prevents the effective operation of consumer co-operatives, be repealed.

Licensing—

(g) (i) That the administrative and judicial functions of the Board as to licensing be separated by setting up an Advisory Board somewhat similar to the Insurance Advisory Board in order that the judicial functions of the Milk Control Board be exercised as provided by the statute free from administrative bias.

(ii) That the conditions entitling applicants to licenses be more explicitly set forth in the Milk Control Act.

Composition of the Board—

(h) At the moment the Board is set up on a representational basis. Without unduly criticizing the unselfish service that has already been given to it by those appointed under this system, I am unable to see much solid advantage in it. I would recommend that in future when appointments to the Board are being considered regard should be had to the capacity and fitness of the person concerned rather than to the interest he or she represents.

Consumer Representation on Milk Control Board—

(i) In respect of consumer representation on the Milk Control Board, as I have said I do not think that representation of special interests adds greatly to the strength of such a body. The present provisions in the Milk Control Act for consumer representation in special markets, should be continued, but the administrative practices in respect of them should be changed and the intent of the Act followed more closely. I would recommend that where a consumer representative is accredited to the Board and enters on his duties, he should be required to take an oath of secrecy and that all the information available to the Board be completely disclosed to the consumer representative in respect of the matter under consideration.

Recommendations with Respect to Producers

In respect to the producers, as I have already stated, my view is that the ultimate solution of their difficulties will be found in the setting up of a marketing organization for all producers. This may not be immediately practicable and, if not, I would suggest:

(a) That a start be made in organizing the fluid milk producers, and that the further study and consideration of the entire project be initiated and pursued with as little delay as possible by the existing joint committee representing the four sections of milk producers. In respect of the form of such an organization, attention is again specifically directed to the British scheme, which would seem to provide most of the necessary principles upon which to build such an organization.

(b) That the existing producer organizations, particularly the Ontario Whole Milk Producers' League be encouraged themselves to take steps to process and dispose of fluid milk not required for the fluid market. In view of Mr. Entwistle's study of production prices paid producers and distributor spreads, a substantial increase in the price paid to producers for secondary milk would appear to be justified at the present time without alteration of consumer prices for the resulting products and such increase might be found to be as much as 10% more than present prices.

(c) That the regulations of the Milk Control Board assure that producer association employees be permitted to check the accuracy of testing in distributor and processing plants to remove present suspicion and dissatisfaction regarding the accuracy of these tests.

(d) That the practice of paying price premiums or discounts in accordance with variations in butter-fat content of the milk be reviewed to the end that the amounts paid correspond with current prices for butter-fat. These particular payments should be subjected to review and, when necessary, revision at monthly intervals.

(e) That in view of the existing conditions of supply and demand no further increases in fluid milk prices be granted at the present time. This recommendation is made in view of the demand situation, and despite the fact that in the view of the Commission existing prices do not cover the cost of production plus a reasonable profit or even a proper administration allowance.

(f) That the present efforts through the Department of Agriculture be intensified to assist producers in applying the knowledge gained by research and study to the further improvement of volume and quality of production and to the further reduction of producers' costs.

Special Recommendations in Respect to Transportation

It is obvious from a perusal of the discussion of Transportation in this report that I regard the present system as uneconomic and wasteful. Ideally, I think it would be desirable to fix the price of milk at the farm and allow normal competitive pressures on the distributors to lead them to rationalize their methods and costs of collection. This may not be immediately practicable, but, if it were possible, I would recommend:

(a) That where the price of milk to producers is fixed, it be fixed on the basis of delivery at the farm.

(b) In default of this I would recommend that the Milk Control Board be given the power to fix rates for transporting milk and to designate and license all truckers of milk.

(c) That the licensing of such truckers under the Commercial Vehicle Act be discontinued.

(d) That the practice of conducting hearings before the Municipal Board be discontinued, and that the whole power be vested in the Milk Control Board.

(e) The regulations under the Milk Control Act, and the Milk Control Act itself, should also be clarified to give the Board authority to designate routes for such truckers.

The foregoing observations in respect to the transportation of fluid milk apply with equal force to the transportation of milk and cream to condensaries and creameries.

(f) That the regulations be changed and the Commercial Vehicle Act be amended to permit farmers to haul milk co-operatively through co-operative associations for themselves and their neighbours, and that such permission be granted without regard to other existing facilities.

Special Recommendations in Respect to Distribution

In the hope that experiments in further economies, such as quantity discount sales, depot sales, every-other-day delivery, five and six-day delivery, zoning and similar practices will be actively investigated and tried, it is recommended:

(a) That the retail consumer price should be made open and competitive without fixation by agreement or Milk Control Board order.

(b) That the special distributor economies brought into effect in 1941 and 1942 under wartime conditions be retained by the distributors.

(c) That all distributors be required to maintain a complete and standardized set of business and financial records.

(d) That returns sufficient to enable the Milk Control Board to determine their costs and profit margins be required of all distributors, to be filed not less than three months after the end of their fiscal year, these records to include details of capitalization, depreciation and financial policies generally.

Recommendations in Respect to Consumers

It must be apparent from a perusal of Chapter 7 that, looking at the over-all picture in Ontario, no recommendations as to price reductions from those presently obtaining can be made when the interests of all the distributors are considered. Mr. Entwistle's report shows that about 12 per cent in number of the distributors, who apparently distribute more than 50 per cent of the fluid milk in the Province, could sell milk at cheaper prices. I suggest that cheaper prices might be brought about by providing for a free competitive price at the consumer level. If it is done by other means it may well be that the larger number of the distributors, something in excess of 750 in all, will not be able to withstand the financial pressure of prices lower than those presently in effect. So far as volume distribution is concerned, it would appear that such a price reduction would adversely affect those who distribute less than half of the volume of fluid milk sold. It would unquestionably affect many of the distributors in smaller markets.

It is a question whether it is best in the public interest to maintain the existing large number of small distributors in certain cases at the cost of milk consumers; or whether through arbitrarily narrowing the distributor's spread it is better to accelerate the slow process of amalgamation that has been going on among the distributors since the passing of the Milk Control Act in 1934. Arbitrary narrowing of the distributor's spread at the present time would undoubtedly accelerate the process of amalgamation and consolidation, and the distribution end of the industry would end in the hands of a few large distributors. As they are presently situated, the smaller distributors, except in rare instances, could not withstand the financial pressure resulting from such a policy. Insofar as many of them are concerned, the result might be financial embarrassment, forcing them to amalgamate with their competitors to obtain larger volume, or they might be forced to sell out to the existing large volume distributors. Which state of affairs is the most desirable is a question of public policy, on which it would not be proper for me to comment. In my view, however, the abolishing of the practice of fixing prices for fluid milk to the consumers and the restoration of competition as to price among the distributors, is well worth trying before other measures are considered.

Nevertheless, despite the apparent costs of production and distribution at the present time, in view of the fact that cheap milk generally means large volume of consumption, it might well pay both the producers and the distributors of fluid milk arbitrarily to cut their prices all along the line to something approaching the level obtaining before the price increases of October 1, 1946, or in any event by a substantial amount. The problem of the producers' surplus, which seriously affects the average price received by the producer, might no longer be so pressing. The experience of the distributors over the war years under conditions of rapidly expanding volume and low consumer prices might justify them in again trying the experiment.

It is recommended that the necessary amendments be made to the Municipal Act and the Milk Control Act to permit the setting up and operation of municipally owned distributor plants with power to deal in all dairy products and that in so doing such distributor operations be made liable to Municipal and Provincial taxes in like manner as other Distributors.

Finally it is recommended that consideration be given to supplying milk to school children in primary and secondary schools through public assistance at cost, or in cases of necessity free of charge; and that in considering the same, attention be paid to the provisions of the National Milk Scheme in Great Britain.

Recommendations in Respect to the Cheese Producers

In respect to the cheese producers, discussion of their problems in the Chapter relating to them does not give rise to any special recommendations, but it would seem essential:

(a) That they take steps which should be implemented in any way possible by the Department of Agriculture to improve the quality of their product and to extend a further and more effective control over its final marketing.

(b) That steps should be taken to familiarize the industry with the provisions of the legislation, both provincial and dominion, providing for financial assistance with respect to the erection of amalgamated factories.

(c) That the cheese milk producers give most serious consideration to the formation of an over-all marketing scheme.

Recommendations in Respect to the Cream Producers and Creameries

The general recommendations made in respect of Transportation would apply with equal force to the transportation of fluid cream used for buttermaking. The recommendations already made in respect of an over-all marketing scheme apply with particular force to this large group of producers.

No doubt any experience gained in the marketing of cream under the Farm Products Marketing Act should be most valuable and should be studied carefully.

Specifically the only additional recommendation I wish to make is that every effort be made by producers, creameries, and through governmental assistance, to greatly increase the volume of production per plant.

Recommendations in Respect to the Condensaries

Many of the observations made in respect to the distributors of fluid milk apply to the manufacturers of milk. It is recommended:

(a) That the Manufacturing Milk Board be given clear authority under the Milk Control Act to require standard methods of accounting, and full and regular information from the manufacturers in connection with their operating costs and profits.

(b) That where such operations in the province represent branch operations of larger concerns with headquarters outside this jurisdiction, a division be made between the business done within and without the province; and to effect this, regulations be made standardizing the accounting methods of these firms.

(c) That along with the study of producer costs in other branches of the dairy industry there be included a study by the Milk Control Board of the costs of producers who produce milk for concentration.

(d) That the producers of milk for concentrated purposes be encouraged to undertake the formation of co-operative processing plants as a means of ensuring that these producers receive the full competive price for their milk and that consideration be given to providing public assistance for such projects.

(e) That the Milk Control Board investigate the present prices paid concentrated producers for their milk, and in view of the financial situation of the manufacturers, consider whether price increases to producers beyond those already granted should not now be enforced.

In conclusion, I desire to record my indebtedness to the Statistics Branch of the Ontario Department of Agriculture for placing at our disposal much of the information available in their records, and for the ready courtesy and co-operation shown. The information has been most helpful both to myself and to Mr. Entwistle.

In connection with the survey of producers' costs, I desire to acknowledge the courteous assistance of Professor H. K. Leckie of the Economics Department and Professor N. J. Thomas of the Soils Department, of the Ontario Agricultural College. Their advice was helpful and suggestive to those assisting the Commission when this survey was made.

Sincere thanks are also due to Professor H. A. Smallfield of the Dairy Department of the Ontario Agricultural College for the information and assistance he has given to the Commission.

Appreciation of the assistance and co-operation received from Mr. C. M. Meek, Chairman of the Milk Control Board has already been recorded in this report.

I also wish to acknowledge the assistance received from producers, distributors, consumers and many other interested persons and organizations in submitting evidence, both documentary and verbal. Many troublesome questions were asked, particularly of the distributors, and for the most part the Commission received the readiest co-operation from those being questioned.

Counsel representing the various interests appearing before the Commission were at all times most helpful.

If I may do so, I would also like to record my appreciation of the very full and impartial manner in which the Press of the Province covered the course of the Inquiry.

I find it difficult to adequately express my appreciation of the assistance rendered to me by Professor W. M. Drummond, who was appointed as Economic Consultant to the Commission. His encyclopaedic knowledge of the problems involved has at all times been at the disposal of myself and all others connected with the Investigation. It is difficult to adequately measure the extent of the assistance and co-operation Professor Drummond has rendered, both during the hearings and in the preparation of this Report. It has been of the highest order. In fairness to Professor Drummond, however, it should be said that I assume full responsibility for any conclusions reached and recommendations made.

Mr. Beverley Matthews, K.C., Counsel to the Commission, was of very great assistance in the conspicuously able and impartial manner in which he brought out the evidence bearing on the matters under consideration. His advice and counsel throughout have been exceedingly helpful.

The extent of the investigation by Mr. John Entwistle, C.P.A., into the financial aspects of the industry is best measured by an examination of his reports, which were of such importance that I felt they should be included as appendixes to this Report. Much information, which it is hoped will be of value to the industry and to the public generally, has been uncovered. It would be gratuitous on my part to say more than that his reports speak very clearly for themselves. Mr. Entwistle's services have been available to me at all times, and to him and to his staff I express my sincere thanks.

To Mr. Donald A. Keith, Barrister-at-law, and Secretary to the Commission, I express my unreserved thanks. The ease with which the whole investigation was managed was largely the result of his work. He has been most active in assisting in the preparation of the Report. His efficiency and conscientious assistance has greatly simplified the task given to me.

Finally, I desire to thank Messrs. Sydney W. Brown, Arthur G. Veitch and J. B. McGregor, Chartered Shorthand Reporters, and official reporters to this Commission, for the painstaking and conscientious manner in which they and their staff performed their duties. "Daily copy" was furnished with faithful regularity, despite difficulties at out-of-town sittings. These gentlemen have also had in hand supervision of the physical production of this report.

I have the honour to be,

Sir,

Your obedient servant,

DALTON C. WELLS,

Commissioner.

Donald A. Keith,

Secretary.

Toronto, 1st August, 1947.

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APPENDICES

to

ONTARIO ROYAL COMMISSION ON MILK

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APPENDIX 1

LIST OF WITNESSES WHO APPEARED BEFORE THE COMMISSION AND PERSONS AND ORGANIZATIONS WHO FILED BRIEFS

Place	Witnesses' Name	Distributor	Producer	Consumer	Transporter	Expert
Toronto						
	1. Mrs. Lily Phelps			x		
	2. A. Savage			x		
	3. Mrs. E. Sanderson			x		
	4. H. W. Emery			x		
	5. A. A. McLeod			x		
	6. S. Smith			x		
	7. C. Coburn			x		
	8. Mrs. H. Murray			x		
	9. T. A. Sutton			x		
	10. Mrs. F. H. Sanderson			x		
	11. C. Kidd			x		
	12. J. Eldon			x		
	13. Mrs. J. F. Cowan		x			
	14. W. L. McKinnon		x			
	15. R. H. Saunders			x		
	16. Dr. F. F. Tisdall					x
	17. J. Aird	x				
	18. H. G. Webster		x			
	19. H. T. Wright				x	
	20. D. R. MacQuarrie				x	
	21. H. Christenson	x				
	22. J. E. Houck	x				
	23. W. W. Cosburn	x				
	24. E. M. Cockin					x
	25. A. S. Thurston		x			
	26. C. Rosebrugh	x				
	27. C. Burns	x				
	28. W. Storey	x				
	29. C. Hooper		x			
	30. J. H. Jose		x			
	31. G. Rouse		x			
	32. Dr. L. C. Swan					x
	33. A. E. Coleman		x			
	34. R. F. Lick		x			
	35. E. H. Clarke			x		
	36. F. McIntyre		x			
	37. E. Kitchen		x			
	38. V. S. Milburn		x			
	39. W. Wood		x			
	40. J. W. Hanson		x			
	41. W. R. Aird	x				
	42. Miss N. Touchburn			x		
	43. M. D. Warner	x				
	44. J. H. Duplan	x				
	45. R. McMaul				x	
	46. J. Goodman				x	
	47. J. C. Hay					x
	48. C. M. Meek					x
	49. H. L. Cummings					x
	50. W. H. Wilmot		x			
	51. J. S. Beck			x		
	52. Ward Hallman		x			
	53. C. E. Lackner					x
Port Arthur						
	54. D. H. Coghlan			x		
	55. J. D. Gibb			x		
	56. J. E. Quinn			x		
	57. L. J. Hare					x

Place	Witnesses' Name	Distributor	Producer	Consumer	Transporter	Expert
Port Arthur—continued						
	58. W. B. Lowe		x			
	59. Jorgen Brohn		x			
	60. A. T. Oliver		x			
	61. F. N. Carter		x			
	62. Alban Bernan		x			
	63. E. J. Edmond		x			
	64. J. McLeod				x	
	64. F. Scollie	x				
	65. H. Lovelady			x		
	66. O. Bingham	x				
	67. Grace Oja			x		
	68. Gertrude Miller			x		
	69. W. Arthur	x				
	70. W. Klomp	x				
	71. L. H. White	x				
North Bay						
	72. Mrs. L. Mernaghan			x		
	73. M . Frank			x		
	74. M. E. McLeod			x		
	75. M. Abramson	x				
	76. T. Seguin				x	
	77. O. Archer	x				
	78. G. W. Ketter	x				
	79. D. Quarrell	x				
	80. D. Rousseau		x			
	81. W. R. Peters		x			
	82. A. E. Rigg		x			
	83. A. Helmer		x			
	84. R. Beithartz		x			
	85. E. Larocque		x			
Belleville						
	86. S. L. Joss		x			
	87. C. H. Ketcheson		x			
	88. E. E. Finkle		x			
	89. E. Massé		x			
	90. N. McCoutrey		x			
	91. G. Graham	x				
	92. S. Graham	x				
	93. K. D. Moncrieff	x				
	94. J. F. Tranerton		x			
	95. L. H. McCaul		x			
	96. J. I. Ballantyne		x			
	97. W. O. Coon		x			
	98. B. Crank		x			
	99. B. R. Baxter		x			
Ottawa						
	100. Mrs. M. Whiteley			x		
	101. Mrs. E. White			x		
	102. W. J. Ahearn			x		
	103. Mrs. E. Pritchard		x			
	104. B. H. Pratt		x			
	105. K. Dowler		x			
	106. D. McAllister		x			
	107. Dr. L. B. Pett					x
	108. Dr. E. F. Johnston					x
	109. W. B. Younghusband		x			
	110. H. J. Clark	x				
	111. F. J. Reynolds	x				
	112. H. Maloney	x				
	113. J. F. Casselman		x			
	114. A. Smith		x			
	115. S. A. Lowrey		x			
	116. H. E. Durant		x			
	117. L. R. Thompson		x			

Place	Witnesses' Name	Distributor	Producer	Consumer	Transporter	Expert
Ottawa—continued						
	118. J. M. Arkell	x				
	119. Dr. J. Vanderleck					x
	120. S. F. Checkland			x		
Windsor						
	121. Mrs. C. W. Beaumont			x		
	122. Mrs. A. Molenko			x		
	123. W. E. Holder			x		
	124. A. Burrell		x			
	125. M. C. Dalton		x			
	126. J. R. Shuel		x			
	127. W. McCormick		x			
	128. J. F. Thomas		x			
	129. Mrs. D. Nolan			x		
	130. A. E. Gignac	x				
	131. L. Cummings			x		
	132. A. Douglas	x				
	133. A. W. Ballentyne		x			
Hamilton						
	134. Mrs. M. Berendt		x			
	135. N. A. Fletcher		x			
	136. S. W. Lawrence	x		x		
	137. W. H. Mason		x			
	138. G. H. Bethune		x			
	139. J. Drysler		x			
	140. R. Emslie		x			
	141. W. D. Black		x			
London						
	142. G. D. Lang			x		
	143. C. J. Dance		x			
	144. F. Way		x			
	145. E. Revell		x			
	146. D. J. Fletcher		x			
	147. J. C. Robb		x			
	148. L. Robb		x			
	149. Mrs. Lucy Cole			x		
	150. C. R. Shackleton		x			
	151. W. A. Shannon			x		
	152. D. Hart		x			
	153. A. L. Dust			x		

BRIEFS

Place and Name	Distributor	Producer	Consumer	Transporter	Expert	Misc.
Toronto						
1. The Ontario Milk Distributors' Association	x					
2. The Ontario Co-operative Union	x					
3. Valley View Dairy	x					
4. The Toronto Milk Distributors' Association	x					
5. The Borden Company Ltd	x					
6. Dominion Dairies Ltd	x					
7. The Ontario Concentrated Milk Producers' Association		x				
8. The Ontario Cheese Producers' Association		x				
9. The Ontario Whole Milk Producers' League		x				
10. The Ontario Cream Producers' League		x				
11. The Ontario Creamery Association		x				
12. Brief—Rural Housewife—(Mrs. T. D. Cowan, R.R. 3, Galt)		x				
13. United Automobile-Aircraft-Agricultural Implement Workers of America—District Council 26			x			
14. The Co-operative Commonwealth Youth Movement—Ontario Section			x			
15. The Co-operative Service of Toronto			x			
16. The Housewives' Consumer Association (Toronto)			x			
17. Ontario Committee of the Labour Progressive Party			x			
18. Scarboro Ratepayers Central Executive Committee			x			
19. The Co-operative Commonwealth Federation—Ontario Section			x			
20. The Consumers' Federated Council			x			
21. The Ontario Federation of Labour			x			
22. The Council of City of Toronto			x			
23. The Associated Milk Foundation			x			
24. Consumers—St. Patrick's Riding—(Submitted by A. Kelso Roberts, K.C., M.L.A.)			x			
25. The Toronto Milk Transport Association				x		
26. Solicitor to Department of Agriculture—James C. Hay					x	
27. Dairy Branch—Department of Agriculture					x	
28. Milk Control Board of Ontario					x	
29. The Shareholders' Institute						x
Port Arthur						
30. The Lakehead Confectioners' Association	x					
31. The Kenora and Dryden Districts—Milk Producers		x				
32. Producer-Distributors of Thunder Bay		x				
33. Brief submitted by Mr. D. H. Coghlan of Port Arthur—a consumer			x			
34. Port Arthur and Fort William Trades and Labour Councils			x			
35. Consumers of Port Arthur			x			
36 Port Arthur Home and School Association			x			
North Bay						
37. The Workers' Co-operative of New Ontario	x					
38. The Kirkland Lake Ladies Auxiliary of the International Union of Mine, Mill and Smelter Workers' Union, Local 77			x			
39. Miss J. Macleod, Consumer, Kirkland Lake			x			

Place and Name	Distributor	Producer	Consumer	Transporter	Expert	Misc.
North Bay—continued						
40. Ninety Patrons of the Glanworth Cheese Factory		x				
Ottawa						
41. The Ottawa Dairies—General Brief	x					
42. Central Dairies Ltd., Ottawa	x					
43. Highclere Dairy, Ottawa	x					
44. Clark Dairy Ltd., Ottawa	x					
45. Ottawa Dairy Company (Division of Borden's Ltd.)	x					
46. Brief submitted by Rural Housewife—Mrs. John Pritchard, Ottawa		x				
47. Consumers of the City of Ottawa			x			
48. Brief presented by Veterinarian—E. J. Johnson.					x	
Windsor						
49. The Borden Company Ltd., Walkerside Division	x					
50. The Essex Milk Producers' Association		x				
51. Survey of Costs—Lammermoor Farm—Courtright, Ontario—W. L. McKinnon		x				
52. The Housewives' Consumer League of Windsor..			x			
53. The Municipal Council—City of Windsor			x			
Hamilton						
54. The Hamilton Co-operative Creameries Ltd.	x					
55. Prospect Dairy Limited	x					
56. City Milk Company Ltd., Hamilton	x					
57. Silverwoods Diaries Ltd., Hamilton and General	x					
58. The Hamilton Milk Producers' Association		x				
59. Milk Production Costs in Hamilton and Niagara Falls District (W. D. Black, Esq.)		x				
60. Dairy Farmers' Wives of Hamilton District		x				
61. Municipal Council of City of Hamilton			x			
62. Submissions by organizations, Niagara Falls, Ont.			x			
63. Consumers of City of St. Catharines			x			
64. Brief presented by Veterinarian Dr. L. C. Swan, St. Catharines					x	
London						
65. The Ex-Service Men's Wives, Mothers and Guardians Association, London, Ontario			x			
66. London Citizens Milk Price Protest Organization			x			
67. Consumers of the City of St. Thomas			x			

APPENDIX 2

TRANSCRIPT OF EVIDENCE OF DR. F. F. TISDALL AND DR. L. B. PETT

Dr. F. F. Tisdall

VOLUME XXXI

TORONTO, ONTARIO

(SECOND SESSION)

1st February, 1947.

—The Commission resumed at 10:00 o'clock, a.m.

MR. MATTHEWS: As you know, sir, we have only one witness this morning, Dr. Tisdall, who has been good enough to come.

DR. F. F. TISDALL, Sworn,

EXAMINED BY MR. MATTHEWS:

Q. Dr. Tisdall, you are a medical doctor?

A. Yes, sir.

Q. And a graduate of the University of Toronto.

Q. And you are practising here in Toronto now?

A. Yes.

Q. And I understand you have a very close connection with the Sick Children's Hospital?

A. I am on the staff of the Sick Children's Hospital.

Q. I also understand you have for some time specialized on the subject of nutrition?

A. Yes, sir.

Q. And that you are the chairman, or a member of a good many committees. I can't remember those committees and I wonder if you would name them for me?

A. Well, I am chairman of the Committee on Nutrition of the Canadian Medical Association; chairman of the National Committee on Nutrition of the Canadian Red Cross Society; a member of the Committee on Nutrition of the Federal Department of Health and Welfare, Ottawa; a member of the Food and Nutrition Board of the National Research Council of Washington; and a member of the Advisory Committee on Nutrition of the Food and Agricultural Organization of the United Nations.

Q. I understand you were quite recently in Copenhagen for the Food Conference?

A. Yes.

Q. How long ago was that?

A. In September.

Q. Doctor, I understand you had the opportunity of reading the evidence of Dr. Pett, which he gave in Ottawa last December?

A. Yes.

Q. Are you in general agreement with what he said?

A. Yes, sir.

Q. Did you find any part of his evidence with which you disagreed?

A. If I did it was only on very minor points, and I would say in general I was thoroughly in accord with what he said.

Q. And you also had an opportunity of examining these two charts which Dr. Pett gave us?

A. Yes.

Q. And you do not disagree, I suppose, with any information disclosed on these charts?

A. I must say I didn't examine them with the idea of saying I agreed with everything, because I don't remember. I only examined them in a general way.

THE COMMISSIONER: Did anything strike you as being out of line, is that a fair way of putting it?

A. No, there was nothing out of line.

MR. MATTHEWS: Dr. Tisdall, we have had a great many briefs submitted to this Commission, and almost invariably they start off by speaking of the vital necessity of milk as part of our diet, and the reason we asked you to come here this morning, is to give us your opinion on that statement, and give us what you can of the value of milk as a food.

A. To do that, I have to take a moment, with your permission, to tell you the composition of milk, which you probably know, the composition from a nutritional standpoint.

THE COMMISSIONER: You just go ahead and say what you feel you want to.

A. Milk contains approximately 3½ per cent fat, approximately 4 per cent carbohydrates or milk sugar, and about 3½ per cent protein. In addition, it contains a large number of vitamins and practically all the minerals essential for life with the exception of iron and perhaps iodine, depending on the pasture. It is the most perfect single food we have today, there is no other single food that contains as many nutrients essential to life as does milk.

Now we want to know if all these nutrients can be replaced by other food sources, because if they can be replaced, and replaced economically, then milk is not on any pinnacle, because we could simply take perhaps three or four other foods and replace it, but I would say from our studies, our respect for milk goes up.

Now, considering the various nutrients, and we must have as a background the fact that we need between 35 and 40 individual nutrients to live, and if any one of those is taken out of your diet or mine, first of all health is impaired, and if it eventually goes on long enough we die.

Now, considering it on that basis, and I am not going to run through the whole 35 or 40 this morning, I will just pick out a few. We will take first, fat. The fat in milk can be readily replaced by fat from other sources, and I will take this opportunity of saying without being asked, that from the standpoint of setting the value of milk, the economic value of milk on its fat content is completely wrong. From the standpoint of the desires in your household and mine, it is all right because we like fats.

MR. MATTHEWS: Like the taste?

A. We like the taste. This morning I had some cream on my cereal. I would have been a little upset if I had had skim milk. Nutritionally there was no particular need for me to have that cream, that is what I am bringing out.

Secondly, the carbohydrate or milk sugar can be replaced very readily by much cheaper sources, so we are not concerned with milk from its fat content or carbohydrate content. Its protein content is an entirely different story because the protein is what is termed animal protein of the very highest nutritional order.

THE COMMISSIONER: Is it contained in cream?

A. No, there is practically none; the higher the cream content the higher the fat content; and the lower the protein.

Q. Cream is largely fat?

A. Yes.

Q. What else?

A. We can say this, that cream is milk with a fat content up to 18 per cent, or whatever the fat content is. There is certainly some milk sugar in it and protein. You simply have to look at it as milk with fat in it, and as the fat content goes up, the total of the others goes down.

MR. MATTHEWS: I think Dr. Pett said it was a source of Vitamin A?

A. Take the fat out of milk and you take the Vitamin A. I was not talking about Vitamin A—I was talking about fat, carbohydrates, and now protein, and protein is a very high quality and very valuable food.

Q. Of course we could get that protein from other foods?

A. We could get protein of equal quality from other foods.

Q. What sort of foods?

A. Taking the more common ones, meat, eggs, poultry and fish.

THE COMMISSIONER: How about cheese?

A. Cheese is milk.

Q. You say it has the same protein content?

A. Yes, cheese is the fat and protein of milk. The only difference has been to remove the fluid and some of the soluble things as well, such as some sugars and also some proteins that are soluble that won't be precipitated in making the curds. We regard cheese as almost the same as milk, not quite.

Q. Not quite as good?

A. No, because you remove some of it; roughly one ounce of cheese is equivalent to 8 ounces of milk in most things—not all things. Now certainly milk does not have its high position in the nutrition world entirely on protein content because protein of a similar grade can be obtained elsewhere, although for a young infant and young child it does occupy an unique position because you cannot feed a month old baby a piece of beef steak and other things of that nature as readily as you can milk, but from the standpoint of the older child and adult, the protein in milk, although it is extremely valuable, and a very important factor in its nutritional value, it is not indispensable.

Now, when you get down to the next group, the vitamins, you find that milk is a very good source of Vitamin A, and to repeat again, Vitamin A is fat soluble, therefore, if you remove the fat you remove the Vitamin A. Milk is not unique as a source of Vitamin A as you get Vitamin A in many other things. You can get a precursor of Vitamin A, that is carotene, and when it is eaten it is acted on in the body and divided into or changed into Vitamin A chemically—and from a nutritional standpoint, if you eat a substance rich in carotene, you will never suffer from a Vitamin A deficiency. Compared with milk, 16 ounces of milk will give you 600 international units of Vitamin A, 3½ ounces of carrots will give you 12,000 units, sweet potatoes 6,000, squash 4,000, and turnips 2,500. I do not need to give you any other illustrations to show you the unique value of milk is not in its Vitamin A. Also it is not on account of its thiamine content, which is one of the members of the B complex, that milk is unique nutritionally.

THE COMMISSIONER: You talk about milk giving 600 units of Vitamin A? A. 16 ounces of milk.

Q. What fat content is that milk?

A. That could be the whole milk, roughly 3½ per cent, and if you cut your milk down to 2 per cent you have to reduce it by that proportion, and as you take out the fat, if you get it completely fat free, you have no Vitamin A left. It is all fat soluble.

MR. MATTHEWS: Is thiamine, Vitamin B, also a fat soluble?

A. No. I suppose I shouldn't correct a statement made—it is Vitamin B-1.

Q. You correct anything there at all.

A. There are 9 or 10 members of the B group and thiamine is one.

Q. As a matter of fact on that chart it is B-1 and I misread it.

A. Yes, because there are nine or ten more subdivisions of the B group, and thiamine, which is essential to life—and lack of thiamine incidentally caused more deaths in the world before this war than any single disease. Beri-beri in the Far East is caused by lack of thiamine. They polish the rice and take off all the thiamine, or most of it, and that is the cause of literally hundreds of thousands of deaths in the Far East, and it is well known in medical literature there are more deaths or were more deaths before the war due to beri-beri, than any other disease in the world.

Q. If these people could be given a constant diet that includes milk, this condition will disappear?

A. One of the recommendations of the Food and Agricultural Committee of the United Nations is, at the earliest possible moment the milk supply of those nations should be increased, and if possible the waste of skim milk in the nations that are rich in milk, waste from the standpoint of human consumption, that is being used for animal food or other purposes, should be suitably processed and distributed to those countries.

Q. That is made into powder and shipped over there?

A. Yes. Now milk is a very fair source of thiamine, it isn't a rich source, it is a very fair source. In our scheme of things it supplies an appreciable amount of thiamine.

Now you come to the next vitamin we are concerned with and you get an entirely different story, and that is riboflavin or Vitamin B-2, and I am going to take you back for a moment to the war years and tell you of some of our work with the Royal Canadian Air Force on riboflavin.

Q. That is the stuff that affects the eyes?

A. The lack of riboflavin can cause the following eye symptoms, and I would like you to think if you were a pilot in a plane, defending our country, over the Atlantic, as our boys did, and your life and the life of your crew depended on your acuity of vision and so on—the symptoms that develop are a burning sensation under the eyes, a sandy sensation under the eye lids, dizziness, headaches and lack of visual acuity.

In examination of our boys down on the east coast, back in the early days of the war, our air crew, we found that 75 per cent of the boys examined had two or more of those symptoms, and their answer was that "Sure, you cannot go out over the Atlantic for 12 hours or 18 hours at a lick and not come back without your eyes being tired, having a bit of headache, a sandy sensation under the eyes and watering of the eyes, and other symptoms." They took it for granted. Yet, when we gave those boys additional riboflavin in two months time 95 per cent had either complete disappearance of these symptoms or marked improvement, compared to only 10 per cent who were given dummy capsules and thought they were improved.

That evidence was so important from a health standpoint when presented to the proper authorities the milk ration of the Canadian armed forces was raised to the highest milk ration of any armed service in the world, that of 20 ounces per day. That was the milk ration of the Canadian armed services, which was higher than the United States, which was higher than Great Britain, and which was higher than any other armed service in the world. We gave it largely but not entirely for its riboflavin content.

Q. Can we get that Vitamin B-2 from other foods?

A. The answer is yes, technically so, but if you wanted to get the amount of riboflavin which is contained in a quart of milk you would have to eat 2 pounds of roast beef, you would have to eat 2 pounds of dried beans which when they are cooked swell up quite a bit, you would have to eat 2½ pounds of fish, 4 pounds of cauliflower, or a dozen eggs, and those are the better sources.

Q. All that sounds more difficult than drinking a glass of milk. A. I will say so.

From a practical standpoint we can say that if under our Canadian habits of eating we do not include in the diet each day the amount of milk which we recommend we can assure you that in all probability you are not receiving an amount of riboflavin which is essential for you to enjoy the optimal level of health and efficiency. That is, in our opinion, one of the unique features of our milk. It is essential to have milk in your diet if you are going to receive an adequate amount of riboflavin, an amount necessary for good health.

Q. What about calcium? Can we come to calcium at this point?

A. No. We will come to niacin. We have dealt with Vitamin A, and, to conclude this part of it, milk is a very good source of Vitamin A, but you can obtain Vitamin A from any coloured vegetable except perhaps beets. There are many other sources that are richer than milk in Vitamin A. It is a very fair source of thiamine. It also may be obtained elsewhere. It is unique as being our best source of riboflavin, but it is not a good source of niacin.

Q. Is it a vitamin?

A. It is one of the members of the B-complex.

Q. It has not a number?

A. No, it has not got a number.

Q. There is another way of writing it down?

A. No. It was referred to some years ago as the pellagra preventing vitamin, a disease which we practically never see here in Canada, but before the war there were over 100,000 pellagras in the southern United States. The evidences of the disease are skin lesions in which they get a rash and discoloration of the skin, gastro-intestinal symptoms in which they develop diarrhea and are completely upset from that standpoint, and also they are affected mentally so that they may go completely insane. When given niacin the effect is most dramatic in that in 24 to 28 hours those people who are completely off their heads are normal individuals mentally. But, that is not a problem for Canada; we do not see pellagra here at all.

One point for your interest is that in the United States in the south their diet is largely corn and very low in milk. Even though milk is not very high in niacin it is thought that the protein and other factors reduce the requirement for niacin.

There is one other vitamin, ascorbic acid, or Vitamin C which you get in our Canadian tomatoes, in our Canadian cabbage, in our Canadian turnips, and in our Canadian potatoes. You get it in very large quantities in imported citrus fruits and fruit juices. Milk contains practically none of it, or a very small amount, so its value as a source of ascorbic acid is negligible.

We end by riboflavin standing out on a pinnacle, milk being the most practical source of this vitamin which is essential for good health and life, itself.

You ask me about minerals. There are no less than 13 minerals which are known to be essential for life. I will not bother you by going over them. You know you need calcium, phosphorus for bones, iron for blood, iodine to prevent goitre, sulphur to go in the hair and all the rest of it. There are 13 in all. We do not need to worry about these, the whole lot; we need to worry in our Canadian diet about three, namely, calcium, iron and iodine.

Q. What is the last one?

A. Iodine. In countries the food of which contains very little iodine, such as Switzerland, goitre was very prevalent and they put iodine in salt. That is the reason to-day that so much salt in Canada is iodized, because you will not develop goitre due to lack of iodine if you are taking iodized salt. There is very little iodine in milk.

We get iron in many foods. Milk is practically devoid of iron.

The third one with which we are concerned is calcium. I would say if your diet does not contain an adequate amount of milk you are not getting the amount of calcium which is essential for the optimal level of health—not just an average level of health but the optimal. We need approximately 800 milligrams of calcium a day.

Q. What is that in quarts of milk?

A. It is approximately 1½ pints of milk—30 ounces. 1½ pints of milk will supply one gram. Adults need 8/10ths of a gram. Children need more than a gram, so we believe that from a national standpoint if we take the per capita requirement of calcium for the nation for optimal health it should be about a gram a day. 30 ounces of milk will supply this, or four ounces of cheese will supply this.

Q. In normal everyday conversation I understand you usually speak of 1½ pints for a child and a pint for an adult?

A. You are quite correct. 1½ pints for a child for calcium and other requirements which are greater than for an adult. A pint for an adult.

Q. I understand you draw the line at about 21 years between children and adults for this purpose?

A. We will qualify that by saying "for this purpose."

THE COMMISSIONER: Is the bone growth complete by 21 years of age?

A. Not 100 per cent, but it is so close to it for the purposes of this discussion of calcium I think we can reasonably set something in that neighbourhood as the age at which the calcium requirements are going down. The highest requirements are with your adolescent children who are shooting up a couple of inches or more a year.

MR. MATTHEWS: Where did the man, woman, and child 5,000 years ago get calcium? They did not have dairy herds then.

A. I think we can give you the best answer to that having regard to our studies of our Canadian Bush Indian who perhaps lived a little bit like our ancestors did 5,000 years ago.

When they shoot an animal to-day, if it is a small animal they eat the bones. If it is a large animal they chop the bones up and put them in a pot and boil them for two or three days and gnaw on them the same as a dog does. That is, they will chew on it and bite on it and get the marrow out, and, along with the marrow, the calcium. We are, and dogs are carnivorous animals. They get their calcium from bones. The Canadian Bush Indian to-day gets his calcium largely from the bones he eats, and, although I was not present 5,000 years ago, I think we could infer that our ancestors got their calcium the same way.

Q. If I chew the bones in the stew do I get some calcium without eating the bones?

A. You will get some from the stew; but, do not forget, these people cut those bones up and chew them with their powerfully muscled jaws. I have seen them actually take a rabbit bone and chew it up the same as we could chew something which was softer. They will actually eat it.

Q. A rabbit bone to them is like a piece of toast to us?

A. Getting over to where calcium can be obtained elsewhere, you will note I said that milk is unique as a source of calcium. I say you can get your gram of calcium elsewhere if you want it. You would have to eat 3 pounds of celery, or 5 pounds of cabbage—

Q. That last prospect is not very pleasant.

A. —or, if you are a good Scotsman and are fond of your oatmeal, you will take 3 pounds of dry oatmeal, make it into a porridge, into a tubful, and you will get your gram of calcium.

Q. Which I can get from 1½ pints of milk?

A. Or from 4 ounces of cheese; or, if you are an Englishman and are very fond of your bread and roast beef you can get it by taking 7 pounds of bread or 17 pounds of roast beef. You just cannot get an adequate supply of calcium without including in your diet each day milk or cheese. Our study since 1919 on this aspect of our work constantly increases our respect for milk as a source of calcium.

WITNESS (Continuing): Now, that, I think, has set out in a rather lengthy form what many nutritionists believe constitutes the unique value of milk from the standpoint of food intake in Canada. We cannot get an adequate supply of calcium unless we take milk nor an adequate supply of riboflavin unless we take milk. Milk contains an excellent source of animal protein which is particularly well-handled by the young child, and also contains adequate amounts of the vitamin thiamine, and many of the minerals.

MR. MATTHEWS: Can you illustrate the importance of milk in our diet by reference by parity of accomplishment of countries? Have some countries healthier people and have they accomplished more than others because they are on a higher milk consuming diet?

A. Yes. If you take a table showing the per capita milk consumption of countries of the world and opposite that table place the accomplishments of those countries, the position they occupy in world affairs, and also the figures of longevity with respect to those countries, you will find a very distinct correlation, because in the countries that are the higher milk consumers we have the leaders in the world to-day: Canada, United States, Great Britain, Norway, Sweden, Denmark, Holland, Germany, New Zealand and Australia; those are the greatest milk-consuming countries to-day. Incidentally we have not the figures on Russia.

Now, if you look at the other end you will find that the low milk-consuming countries are such countries as China, India, and other countries that are not as great factors in world affairs to-day as the ones I have mentioned, and their longevity figures are very definitely away down. In fact, there is a very close correlation between the per capita consumption of milk and the longevity figures of those countries.

Q. Would it be fair to say that the Scottish theory that the British Empire was built on porridge is mythical?

A. No; because nobody I know of eats porridge without a little milk on it, even your Scotsman.

Q. I agree that I would not want to eat porridge without milk. Have we finished with that aspect?

A. Yes.

Q. Apart from taste and flavour, which I presume anybody will agree is largely a matter of habit, what would you say would be the optimum butter-fat content of milk for normal every-day use?

A. For adults just the way it comes from the cow plus being pasteurized. Raw milk is distinctly unsafe even on accredited herds, and I say that with very personal knowledge because I am a farmer and have 28 head of Ayrshire cattle; I would not think of allowing my family to drink raw milk from my herd, although the barns and equipment are perfectly clean, because pasteurization is essential. For the average adult the milk that comes from the cow, which is 3½ per cent fat, is best. If, however, you are not an average individual and are having digestive trouble, fat is the most difficult element to digest.

Q. You speak of the way it comes from the cow?

A. 3½ per cent fat.

Q. The way it comes from the cow, is, for all practical purposes, the same as the way we find it in the bottle? A. Yes.

Q. And so for adult purposes you say the way we are getting our milk now is about right?

A. The only way you can modify that, I gather, is to take the fat off.

Q. Yes? A. We have already said that the fat content of milk is not of tremendous value and can be replaced by other sources of fat that are cheaper, but it has great value because the Vitamin A is in the fat. Therefore if you skim the milk you take off some of the Vitamin A, but you can get over 12,000 units from a helping of carrots as compared with 650 units from 16 ounces of milk.

Q. What about children? What would be the optimum fat content for them?

A. If we run across digestive trouble in children the first thing we look for is fat as the cause, and nutritionists throughout Canada will not use whole milk; they use whole milk with some of the fat taken off, say 3 per cent down to 2 per cent, and if you have a baby that is having digestive upsets very frequently the procedure is to reduce the fat content.

Q. Then it is important that people should be able to get skim milk?

A. Yes, and you can take off the cream for father and give the youngsters the skim milk; that is the way to get it.

Q. And that is as effective as any other way?

A. Certainly. If you get over into economics I must remind you that I am a doctor and know nothing about economics, and would not care to answer questions on the subject of milk from the standpoint of dollars and cents. I am no authority on that; in fact, I can hardly understand my auditor's reports, other than the money in the bank.

THE COMMISSIONER: Have you any money in your bank from your farming operations?

A. I have paid out a great deal of money in connection with my farming operations, but I have yet to receive any money from the farm to put in the bank.

Q. That is what I suspected.

A. I gather that you are passing over to an economic problem; would it not be better to skim off the fat and sell it at the high price it gets for butter and use the very valuable partly skimmed milk. I am completely ignorant of economics, because there are one thousand and one things that are involved therein. I may say that that aspect of it has received study from various groups who are aware of the economic aspect. It is a most complex problem, and may change our whole dairy industry.

Q. Along the same line, the way milk is valued at the moment is by the butter-fat test. Have you any suggestions as to say other tests? I think the butter-fat test is used because it is handy and simple, and could be universally applied. Before it was used I understand milk was sold by volume?

A. I am sorry, sir, that I cannot answer that question; I have not given any thought to it.

MR. MATTHEWS: Thank you very much indeed, Dr. Tisdall.

MR. SEDGWICK: I represent the dairies, doctor, and desire on their behalf to express gratitude to you for your very valuable contribution. I was so impressed by it that I thought my clients might like to have it printed and give it wide distribution. I do not think the story you have told us this morning should be confined to the minutes of this Royal Commission.

THE COMMISSIONER: It may find its way into the report.

MR. SEDGWICK: I hope so.

WITNESS: May I point out to Mr. Sedgwick, and hope that he in turn will point out to his clients, that we at the Hospital for Sick Children in Toronto are the best salesmen they have got. Please remember that when contemplating donations to the hospital.

MR. SEDGWICK: I shall certainly pass that information on, doctor.

THE COMMISSIONER: I would like to express my thanks to you, too, doctor. Your evidence has been most helpful.

---Witness withdrew.

DR. LIONEL B. PETT, sworn:

EXAMINED BY MR. MATTHEWS:

Q. Dr. Pett, you are a medical doctor and also a doctor of philosophy?

A. That is correct.

Q. And at the present time you are holding the appointment of Director of the Division of Nutrition in the Department of National Health and Welfare here in Ottawa?

A. That is correct.

Q. And you have been kind enough at the Commission's request to prepare two tables to show the nutritional value of milk, is that right?

A. Yes, sir.

Q. And I would like, Mr. Secretary, to have those filed as two exhibits.

—EXHIBIT NO. 14: A comparison of the nutritive values of skim milk, whole milk, 3.0% fat, whole milk, 3.5% fat, prepared by Dr. L. B. Pett.

—EXHIBIT NO. 15: Table prepared by Dr. L. B. Pett showing the amount of energy units (calories) the consumer of milk gets for one dollar.

Q. Now copies of these two exhibits have been distributed as far as they will go, and I would like you to direct your attention first of all, doctor, to the bigger picture, the one that shows the greater detail, and I take it that this exhibit deals with all the nutritive values contained in a quantity of milk, is that right?

A. Yes, not only of milk, since nutrition specialists like myself classify all foods in terms of these particular subdivisions, and perhaps one or two others; in other words, this is the common denominator by which all foods can be judged nutritionally.

Q. And are some of these figures more important than others, that is to say, would you agree with me that the protein division is perhaps more important than some of the others?

A. Well, in nutrition we divide foods rather sharply according to whether they provide energy alone, of which I think a good example would be sugar, since it contains energy or heat value alone, but no other nutritional value. On the other hand, all the other subdivisions such as are listed here have very specific physiological value in the body, of which perhaps protein is the chief and most valuable. It originally was given the name protein because that name denoted its meaning, it is the prime substance of importance to living beings.

Q. And am I right in thinking that the calories are in the category of providing the energy you speak of?

A. That is right, a calory is a unit of heat, which is a method of measuring either heat or any other form of energy.

Q. Now comparing the value of skim milk as against the other two types of milk containing respectively 3 and 3.5 per cent butter-fat, I take it that in protein the skim milk is just as good as the other two?

A. That is the meaning of this chart.

Q. And of calcium, phosphorus, iron, Vitamin "A", thiamine or Vitamin "B-1", riboflavin, niacin and ascorbic acid, the same is true?

A. The same is true in all these items.

Q. Now, I see in the case of carbo-hydrate per volume, the skim milk is better than the other two?

A. Yes. Carbo-hydrate is another term in this case for sugar and there is a slightly larger amount in a given volume of skim milk. I would hesitate to say that that is a very significant amount, but it certainly is not less than milk containing butter-fat.

Q. Then, the three headings under which skim milk doesn't quite measure up are calories, fat and Vitamin "A"?

A. Yes.

Q. Would you comment on that?

A. As I said, foods have to be distinguished as to whether they supply calories for energy or whether they supply other nutritional values. Fat primarily contributes calories for energy and nothing more, with the exception as shown quite clearly in this graph of what is known as Vitamin "A". However, I might say in passing that Vitamin "A" is not usually nutritionally sought in milk. It is there and it is very useful to be there, but the protein, riboflavin, calcium, phosphorus in milk are all nutritionally much more important factors than the Vitamin "A".

THE COMMISSIONER: Are there many other sources of Vitamin "A"?

A. The richest substance, sir, is ordinary carrots and they are common and prevalently used and are relatively cheap.

MR. MATTHEWS: You do not feed milk to get a supply of Vitamin "A", in other words?

A. No.

Q. Would I be right in saying that the calories and fat can be quite readily obtained in other food?

A. Yes, obviously we get energy, that is calories, from almost all other foods, but some more than others. Particularly in Canada cereals make our great contribution to calory requirement, not fat requirements but calory requirements. Fat is an essential part of the diet but it can be obtained from a number of other products, notably meats.

Q. Then you have attempted to sum that up in the second exhibit?

A. Yes. The second exhibit illustrates the use of two kinds of units that have been in use in our department for some time, again to reduce all foods to some common denominator, either energy units on the one hand or what we call nutrition units on the other. The nutrition units take into account the minerals, calcium and iron, and all the vitamins. In this particular chart, in fact in all these cases, we distinguish and we keep these two things separate, energy and other nutritional values, because you can get, as I said before, energy from a variety of things and nutritional units from other things. However if you wish it is possible to get some idea of the total contribution in return for the consumer dollar by adding these two together. You can add together the two black lines on this chart and you get a total of 192, you can add together the white ones for 3% butter-fat milk and you get a total of 152 and you can add together the barred ones, 3.5 butter-fat milk and you get 157. I would call your attention to those last two totals, 152 and 157, yet there is only one-half per cent of butter-fat difference. In other words, most of the nutritional value, energy value, health value, lies in the solids—not fat—in the milk.

Q. So looking at that exhibit the consumer is getting a lot more for his or her dollar in skim milk than any other type of milk?

A. Per dollar that is correct.

Q. I take it that milk is considered a very important food product more because of its content in minerals and protein and other things rather than its content of calories and fat?

A. I would say that most emphatically, yes. Nutritionally speaking and from the health standpoint the fat content of milk is not the most important factor.

Q. Now, doctor, before this Commission we have heard a good deal of evidence which indicates quite clearly that milk is very often chosen by the consumer on the basis of the butter-fat content, and, in fact, that has been carried so far that to-day the price of milk that is paid to the producer is based on the butter-fat content of the milk rather than on some other gauge. What comment would you make on that?

A. Nutritionally speaking I would say it is an unfortunate trend.

Q. And have you any thoughts as to how that can be explained?

THE COMMISSIONER: I suppose it is an easy way of measuring.

A. I think that is the basis of it, Mr. Commissioner, it is an easy, convenient measurement, and these others are not nearly as convenient.

Q. It would be almost impossible to expect anybody but a chemist to measure it?

A. That is right but the Babcock test has been the standard test over this continent for many years.

MR. MATTHEWS: Looking at the fat value of milk would you like to comment on its value in various age groups?

A. Yes, I wanted to mention one of the reasons, and only one, why I consider unfortunate this trend to have milk evaluated generally or exclusively on butter-fat content. In medical practice, particularly in the early ages of children, a good deal of harm may be done by milk of too high a butter-fat content. This can carry through into a fairly old age group. In other ages of course, that is to say the adolescent who is vigorous and has plenty of vitality and expends a lot of energy, they need all the butter-fat content you have in the milk, and they will eat bread and jam and everything else you can place before them as well for their energy requirements. Again in older adult groups there is medical experience to show that the ability to digest fat may materially decrease, and that a digestive disturbance will result from the larger fat content in the milk.

Q. Well, I take it from what you have said before that even in these age groups where the calories and fat are more important, it is not a difficult problem to find substitutes for these calories and fats in other food products?

A. No.

Q. So looking at the whole picture, and taking into account all the age groups, if you were to work out what you considered would be an optimum butter-fat content, I take it it would be somewhere below 3.4 per cent?

A. I think it might be well below 3.4 per cent butter-fat content, but I would like to point out that the actual setting of the standard for butter-fat content of milk is not exclusively a nutritional consideration. There are, I realize very well, other considerations involved, but there is no health reason why it should bc 3.4 per cent rather than 3.0, no nutritional reason.

Q. One of the other considerations you have in mind would be the matter of testing, is that right?

A. That is a possibility.

Q. What other considerations did you have in mind?

A. Well, I think there is a generally demonstrated problem involved which cannot be exclusively decided on the health basis. What it is, I am not an expert and I cannot say, all I can say is that I do not think the health value alone, the nutritional value, can be used to set a precise figure that would be the best butter-fat content of milk at which to set a standard.

THE COMMISSIONER: If you were setting it from a health standpoint alone what figure would you put it at?

A. Without a good deal of further study I do not think I could set a precise figure, I would just say it could be well below 3.4 per cent.

Q. I gather from your general attitude that you wouldn't put it below 3 per cent?

A. It might go below that but I would hesitate to say so.

Q. Somewhere in that range between 3 and 3.4 per cent?

A. The only thing is there is no health reason to put it at 3.4 rather than at some lower value.

MR. MATTHEWS: In that consideration you are thinking of all age groups whereas if we are thinking of some junior age groups, it might very well be you could very well drop the butter-fat content from your point of view down to a very small percentage?

A. For certain restricted age groups it might very well be below 3 per cent.

THE COMMISSIONER: Skim milk is used in infant feeding?

A. Not skim milk but lower fat content, something below 2 per cent.

MR. MATTHEWS: Is skim milk purchasable in Ottawa at 11 cents a quart?

A. That is my information, yes.

Q. The result of this second exhibit of yours, doctor, is that a quart of skim milk at 11 cents, is a better bargain than whole milk at 15 cents?

A. Nutritionally that is right.

Q. That is all?

A. That is all I can discuss.

EXAMINED BY MR. SEDGWICK:

Q. Doctor, isn't it a fact that by Federal law distributors are compelled to sell milk that is not less than 3.2 per cent butter-fat content?

A. I don't know.

Q. Well, I am so informed and I wouldn't like the impression to get abroad that we can, if we care to, sell skim milk or almost skim milk, and it is just as valuable as whole milk.

THE COMMISSIONER: You sell skim milk, do you not?

MR. SEDGWICK: Yes, but we sell it as skim milk. We cannot arbitrarily reduce the butter-fat content to 3 per cent or 2.5 per cent or anything that suits us.

THE COMMISSIONER: There is nothing to prevent you selling skim milk as such.

MR. SEDGWICK: Not without any butter-fat content whatever.

Doctor, with regard to these percentages, are they constant, is all milk alike or does milk vary? Would the milk of one farmer have more calcium and iron and riboflavin than the milk of another farmer?

A. Variation is a fundamental law of biology, and cows are no different from humans or any other animal in that field. Certainly there is a variation just as in butter-fat one cow of the same breed can give 3 per cent and another up to 6 or 7 per cent, as I know in my own experience. So you can get variation; but these are average figures. I wish to say very definitely whereas butter-fat content from a given cow or herd may vary considerably in its average from time to time, the calcium content tends to be remarkably constant, that is the range of variation is very small, because that is drawn out of the cow's own bones.

Q. I had in mind phosphorus content?

A. Phosphorus content may vary.

THE COMMISSIONER: But that is not created by the addition of butter-fat? A. No.

MR. SEDGWICK: No, I wasn't considering that.

A. There is variation but if you skim all the butter-fat from any milk the resulting analysis is rather remarkable for its consistency rather than its variation. Milk is therefore one of our best foods, it is something you can expect to get a certain amount of nutritional value out of.

Q. When you speak of the nutritional value you find, are you speaking of the Ottawa markets or of all markets?

A. No, I am speaking of all analyses.

Q. Made by you all over Canada?

A. Not made by us personally, they are combined from all the figures available. These figures are taken from a textbook compiled for Canada giving the analyses that are most likely to be encountered in Canadian milk.

Q. Would the variable factor be great; for instance taking the phosphorus which you say would be .42 grams per pound, have you any idea how low that might fall or how high it might rise?

A. Specifically for phosphorus I don't know the full range but I suspect that it would be not more than perhaps .38 to .44.

Q. And the iron, would that be variable?

A. No. Iron is rather constant.

Q. The Vitamin "A" I observe is almost absent in skim milk? A. Yes.

Q. And thiamine or Vitamin "B"?

A. That remains remarkably constant although it will vary. That gives a figure of .16, and it will vary certainly from .14 to .18, perhaps even a little wider than that.

Q. And riboflavin?

A. Yes, that varies, even more sometimes, but that is more dependent on the breed, than it is within one breed. I am talking of milk throughout the country as a whole.

Q. Depending on the breed of cattle, that is it?

A. Yes.

Q. And niacin, is that variable?

A. Not very much. All of them will vary as I have already said.

Q. Yes, I understand. I was wondering if there was any sharp variability?

A. I don't think any of them will vary, let us say, by 50 per cent or something dramatic except your Vitamin "A" for obvious reasons as given here.

Q. Shall we say 20 per cent or something less than that?

A. Yes, that is more the order, 10 to 15 per cent.

Q. Did I understand you to say that doctors prescribe milk with less than 3 per cent of calory content or butter-fat content?

A. Not calory content, butter-fat yes.

Q. That is pediatricians prescribe it for very young children? A. Yes.

Q. Is that an alternative to homogenized milk or in lieu of homogenized milk?

A. I don't think it has any relation to homogenization, it is straight fat content.

Q. With young children fat may be indigestible?
A. Yes.

EXAMINED BY MR. TREPANIER:

Q. To let us understand that, butter-fat being indigestible for children, in the condensory trade in the preparation of infants food they remove a large part of the butter-fat? A. Yes.

Q. For instance, Nestle's and some of these other brands of children's food have the butter-fat purposely removed? A. That is right.

Q. And a child on a balanced diet can get along very well until the age of three without any fat from milk, is that so?

A. I think that is rather a broad statement. As a matter of fact, generalizations of that sort are extremely difficult to make in medicine because medicine is still an art and that means that you have to prescribe for the individual case.

THE COMMISSIONER: There is a variation?

A. Yes, it varies with individuals. However, it is difficult to answer it in that way; I am not quite sure.

MR. TREPANIER: You couldn't say up to what age it is preferable to keep the fat out of the milk?

A. The best method of feeding infants under one year, or under nine months is breast feeding, let us be clear on that, and even then sometimes they must be fed some kind of milk. In many cases, sometimes as high as one-half, they will do better on 2 per cent, and sometimes others will do better on 5 per cent, so it is difficult to generalize. In a large percentage of cases from the age of weaning or before that if they are bottle-fed, a lower content of fat is a definite advantage. There are many infants, and pediatricians believe at present they are actually increasing in Canada, who cannot tolerate as large a fat content in the diet as used to be the case in medical practice perhaps 30 years ago. Therefore, it is necessary to reduce the fat content of the milk by some means or other, and there are cases in my experience, even at 5 years of age, of still having to reduce it, that is some fat has to be removed, reducing it perhaps to something below the current market milk. Does that answer your question?

Q. That covers that point. Now, in the preparation of whole milk powder and skim milk powder, of which there is quite a volume produced, what have you to say as to the nutritional value of milk powder as opposed to the value of fluid milk? Is there an appreciable difference between the nutritional value of milk powder over whole fluid milk of similar fat content? A. No.

Q. So from a nutritional standpoint we would be as well off if we used milk powder of the fat content of our choice instead of using fluid milk?

A. Except for one factor, which is just as important in nutrition as anything else, and that is shall I say acceptability, palatability, some one of those phrases.

THE COMMISSIONER: Nobody has invented powdered milk that tastes very well.

A. I must disagree Mr. Commissioner, if you will permit me. During the war, in Canada particularly, for use in the R.C.A.F., there was developed not so much the powdered milk itself but a method of handling it. It was different, and I drank it many times in reconstituted form and you couldn't possibly distinguish it from fresh whole milk. I have, of course, talked to lots of fliers who have been on stations where it was not properly handled and in those cases it wasn't the milk, it was the way it was handled.

MR. McLEAN: Just one or two questions.

EXAMINED BY MR. McLEAN:

Q. In regard to the question of palatability, I think you will agree with me, taken by and large, skim milk to the general individual is not as palatable as milk with average butter-fat content?

A. No, I can't agree, in our experience that is not quite true.

Q. Have you any members of your family? A. Yes.

Q. Were they started on skim milk?

A. Two per cent milk.

Q. And they are not used to anything else but that?

A. No, they have had other kinds of milk.

Q. They were started on two per cent?

A. Since nine months anyway.

Q. You won't agree with me that skim milk is less palatable to the general run of individuals than the larger butter-fat content milk?

A. I would prefer to separate it from the two boys in my family. I have in my position as Director of Nutrition for the Department of National Health been responsible for surveys of well over 10,000 different Canadians, the results of which dietary studies I have, and I prefer to discuss those statistics from that angle rather than from my boys.

THE COMMISSIONER: I think it is more varied. What did you find there?

A. I can only record the facts in these cases, not opinions, as to whether these people like skim milk. We did find across Canada a surprisingly large use of skim milk. Almost invariably the cream to some extent was poured off the bottle, and the result must be considered skim milk to some degree or other. Offhand I can't say an over-all figure for that because we have it divided into regions but specifically the most recently tabulated area is from the Maritimes, and that showed there must have been about one-third following this habit.

Q. The habit of drinking skim milk or much reduced butter-fat?

A. Yes, much reduced.

Q. One of the things you are concerned with as a nutritionist is to increase the consumption of the healthful food, milk? A. That is right.

Q. And do you feel that the reduction in butter-fat or the introduction of skim milk more generally would not affect the quantity used? I want your view on that.

A. Well, from our observations I don't know any reason why it should reduce the amount of milk being used if there was a somewhat lower butter-fat content, or indeed if it would increase the sale of skim milk.

Q. You don't think that children generally who had been accustomed to drinking milk, or even adults, with butter-fat content, would shy away so to speak from skim milk?

A. I have no doubt some will.

Q. I am afraid I may be affected by my own reaction to skim milk compared to homogenized milk with a fairly high butter-fat content.

A. I have no doubt some individuals would shy away from it, but taking the country as a whole I don't know any reason why any reduction in the use of milk should result from a reduction in butter-fat standards.

Q. And you don't think its more general introduction would affect the quantity of milk consumed if it was carried out as a health program and so to speak sold to the public in that way?

A. No, not from the evidence on these charts which we have to go on that milk is a most valuable food.

THE COMMISSIONER: It is cheaper and might increase consumption.

MR. McLEAN: It might very well do but I am thinking in terms of children, and from my own limited experience I think they won't drink skim milk whereas they will drink homogenized milk.

THE COMMISSIONER: They are just pampered, that is all.

MR. McLEAN: A program of re-education might be necessary, sir.

The minerals in milk come from the food a cow consumes, is that right?

A. Plus her own skeleton.

Q. Which in turn was built by the food she consumed?

A. Yes, but of course cows are shipped around the country and may have consumed good food at one point and currently may not be as well fed.

Q. Do you know in fact in feeding cows and in growing grain for them, there is a loss of the mineral content of the soil in growing the necessary grain?

A. Yes, there is a slight loss.

Q. Which over a period of time must be replenished in order to keep your feed and grain equally as productive of these minerals, is that correct?

A. Yes, it might take a long time before it would need replenishment.

Q. You are not familiar with the problems in some areas where certain minerals are missing from the soil, where in consequence your milk or beef cattle are deficient in certain minerals?

A. I am quite familiar with this problem.

Q. That is a problem that does arise?

A. It is not very common in Canada.

Q. Isn't it a fact that there are some areas in Ontario where it is lacking?

A. Iodine is lacking in certain sections. I may say in response to this I don't know of any area in Ontario in which it has been proved that there is lack of calcium in milk due to its lack in the soil. I would like to say, Mr. Commissioner, we conducted an investigation about three years ago in British Columbia in which there was a definite claim in this respect that something in the milk was deficient, and the analysis didn't bear it out at all, there wasn't anything wrong with their milk, and I don't know who started the rumour, but it was most damaging to the producers at the time and we were very glad to settle it when we finally got the facts.

EXAMINED BY MR. MEDCALF:

Q. Have you any figures concerning the use of skim milk in the Ottawa market?

A. No.

Q. Do you know whether it is a fact that one must have a doctor's certificate in order to get skim milk here?

A. I do not think that can be true.

Q. I have just been informed that it is not true now, but I understand that it was true at one time. I take it that as a nutritional expert you would be opposed to any restrictions upon the purchase of skim milk by the public? You would consider that the public should be able to buy as much skim milk as they chose to buy?

A. From a nutritional standpoint, yes.

Q. And do you have any explanation of why there has been the trend towards skim milk in the Maritimes?

A. I do not know whether there has been that trend.

THE COMMISSIONER: It is a very intelligent section of the country!

MR. MEDCALF: I take it that from a nutritional point of view you are in favour of skim milk as a form of milk for purchase and consumption?

A. Yes.

EXAMINED BY MR. SEDGWICK:

Q. We have been told that the milk sold in this market has, generally speaking, 3.5 butter-fat content. Would it be fair to say that your opinion is that about one half of that would make a good, palatable and nutritional milk drink, that is, about 1.75 or 1.8 milk?

A. I would not answer that question for the Commissioner, and I will not set a figure now. I have said there is no reason why it has to be as high as 3.5 per cent, but to set a definite figure on a health basis is simply not possible under the existing arrangements for protecting the public in various respects. I would remind you, Mr. Commissioner, that the purpose of setting a standard is to assure the public of good wholesome milk that has not been tampered with in some way, and this is an administrative detail that enters into the setting of a figure. Therefore the effect cannot be stated solely on nutritional grounds.

THE COMMISSIONER: Also I suppose knowledge of nutritional values is something that increases as time goes on, and what may be valid to-day may not be necessary 10 years from now, is not that true?

A. To some extent, yes, sir.

Q. You cannot make too dogmatic pronouncements, because you may make other discoveries that will modify your present opinion?

A. That is true.

MR. SEDGWICK: I was only thinking of the case that has been presented to us here and elsewhere, the case of the mother of a large family unable to pay 15 cents per quart for milk. It struck me that a simple solution, and one of which you may approve, is that that mother might buy a quart of skim milk for 11 cents and a quart of whole milk at 15 cents and mix them together and get a satisfactory milk for her family and thus the problem might be solved. What do you say about that?

A. Nutritionally, I think it would be a good move.

EXAMINED BY MR. MATTHEWS:

Q. I am going to ask you a final question, although you may not be the best person to answer it: We have been told here that a bottle of skim milk at 11 cents is a better bargain than a bottle of whole milk at 15 cents, and we have also been told that it is not necessary to have a doctor's certificate to procure skim milk because it is readily available. Why are the people of Ottawa not buying more skim milk?

A. If I venture an answer it would be a purely personal opinion, because

I have no studies in Ottawa on which to base a factual report. My opinion would be that there are several reasons: First, that the average housewife is not even aware that she can get skim milk. Second, that there is in fact some difficulty in procuring it. I have reason to believe that you have to go directly to a distributing plant for it. There may well be other factors; for all I know the people of Ottawa have very discriminating palates.

THE COMMISSIONER: Has there not been propaganda, if you like, for years that people should drink good, rich milk, which meant that it was creamy, and that these discoveries of medical science take quite a while to spread in the popular mind?

A. Yes.

Q. There is a lag, and it may take some years to catch up.

A. Yes. The general public, I think, are not familiar with the fact that by far the best amount of nutritional value of milk does not lie in the butter-fat.

Q. I would think that is true.

A. Yes.

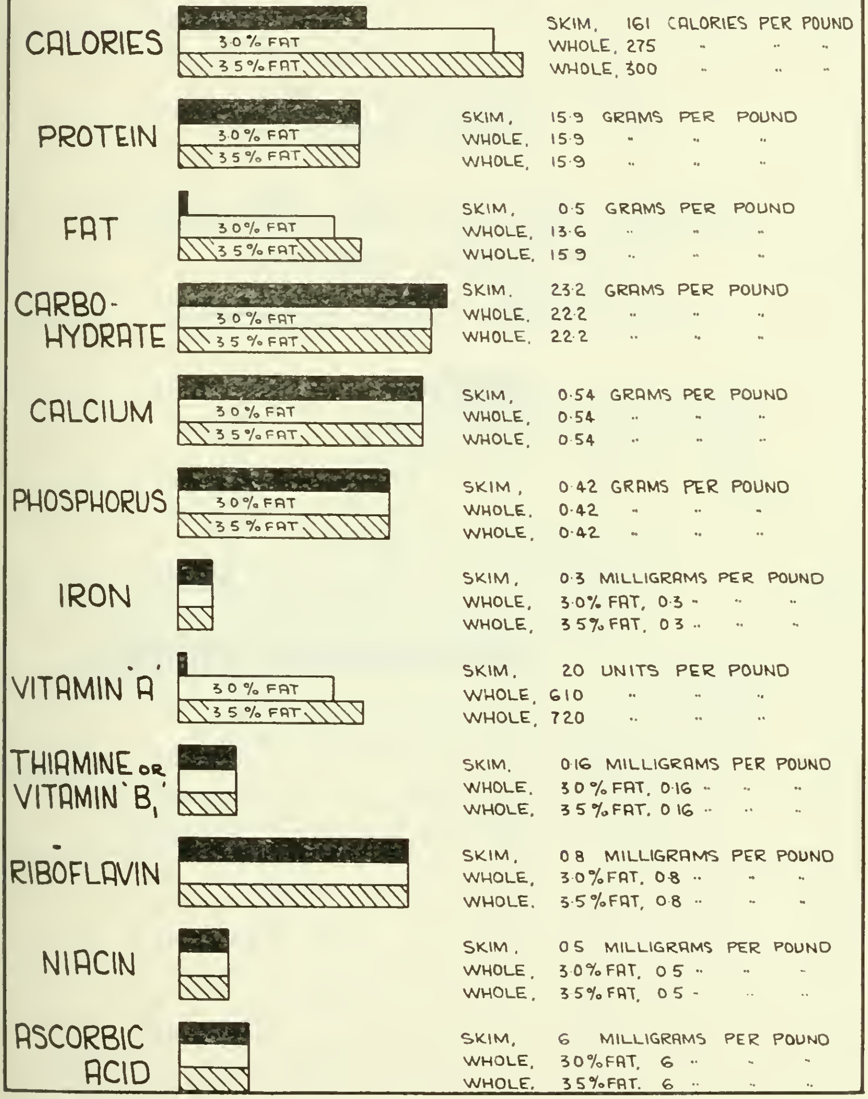
THE COMMISSIONER: Thank you very much, doctor.

MR. MATTHEWS: Sir, I have received a request that Mrs. Marion Whiteley should re-enter the witness box and say something on this particular subject.

THE COMMISSIONER: Certainly.

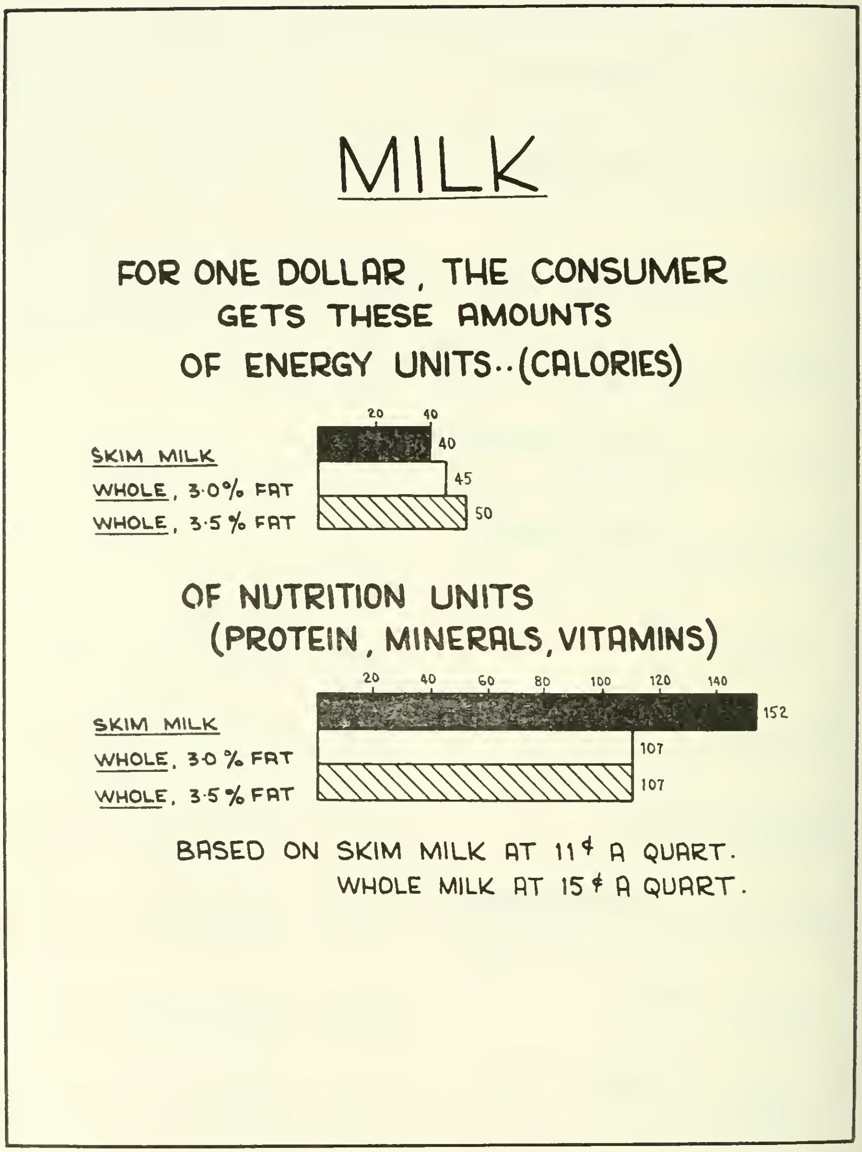
EXHIBIT NO. 14

A COMPARISON OF THE NUTRITIVE VALUES OF SKIM MILK, WHOLE MILK, 3·0% FAT, WHOLE MILK, 3·5% FAT



NUTRITION DIVISION, DEPT OF NATIONAL HEALTH AND WELFARE, 1946

EXHIBIT NO. 15



NUTRITION DIVISION, DEPT OF NATIONAL HEALTH AND WELFARE, \1946

APPENDIX 3

NUMBER OF LICENSES ISSUED 1934-46 BY MILK CONTROL BOARD

Licenses Issued:

Year	Regular Distributor	Producer Distributor	Peddler	Milk Transporters	Milk Manufacturers	Total
1934	Not differentiated					1,335
1935	Not differentiated					1,624
1936	647	861	87	177	28	1,800
1937	750	924	87	205	32	1,998
1938	598	850	90	220	36	1,794
1939	607	590	150	235	38	1,620
1940	610	572	129	231	40	1,582
1941	635	490	116	230	40	1,511
1942	624	440	100	182	43	1,389
1943	610	452	125	181	43	1,411
1944	615	415	72	184	46	1,332
1945	624	389	76	239	46	1,374
1946	635	346	83	259	48	1,371

APPENDIX 4

CHAPTER 30

Original Milk Control Act—Assented to April 3rd, 1934.
and Amendments
(UP TO 1937)

(Note: Original Act in small letters; amendments in capital letters.)

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

Short title. 1. This Act may be cited as *The Milk Control Act*, 1934.

"Milk." 1a. IN THIS ACT, UNLESS THE CONTEXT OTHERWISE REQUIRES, "MILK" SHALL INCLUDE WHOLE MILK AND SUCH PRODUCTS OF MILK AS ARE SUPPLIED, PROCESSED, DISTRIBUTED OR SOLD IN ANY FORM OTHER THAN BUTTER AND CHEESE. (1935, Cap. 40, Sec. 2).

Board constituted. 2.—(1) There shall be a board to be known as "The Milk Control Board of Ontario," hereinafter called the "board" which shall be a body corporate and have the powers and duties herein specified and the administration of this Act and the regulations.

Number of members. (2) The board shall consist of one or more members to be appointed by the Lieutenant-Governor in Council to hold office during pleasure and if more than one member is appointed, the Lieutenant-Governor in Council shall designate which one of them shall be the chairman of the board and any vacancies in the said board shall be filled by the Lieutenant-Governor in Council.

Remuneration, etc., of members. (3) The member or members of the board shall receive such remuneration, allowances and expenses as may be determined by the Lieutenant-Governor in Council.

Appointment of officers, clerks, etc. (4) The board may, with the approval of the Lieutenant-Governor in Council appoint and employ such officers, clerks and employees as may be necessary, and the remuneration of persons so appointed shall be determined by the Lieutenant-Governor in Council.

Expenses of Board. (5) All salaries, remuneration and expenses of the board and of its officers, clerks and servants shall be paid out of the Consolidated Revenue Fund upon the certificate of the Minister of Agriculture or of an officer of his Department designated by him for the purpose. (REPEALED, 1935, Cap. 40, Sec. 3.)

(5) ALL MONEYS REQUIRED FOR THE PURPOSE OF THIS ACT SHALL BE PAID OUT OF ANY SUM APPROPRIATED BY THE LEGISLATURE AND VOTED BY THE ASSEMBLY FOR THAT PURPOSE. (1935, Cap. 40, Sec. 3).

License required. 2a.—(1) NO PERSON SHALL, DIRECTLY OR INDIRECTLY, ENGAGE IN OR CARRY ON THE BUSINESS OF SUPPLYING, DISTRIBUTING, TRANSPORTING, PROCESSING OR SELLING MILK UNLESS SUCH PERSON IS THE HOLDER OF A LICENSE ISSUED BY THE BOARD.

Exception. (2) THIS SECTION SHALL NOT APPLY TO THOSE PERSONS OR CLASSES OF PERSONS DESIGNATED BY THE BOARD IN REGULATIONS PASSED UNDER THE AUTHORITY OF THIS ACT. (1935, Cap. 40, Sec. 4).

Jurisdiction of Board. 3.—(1) The board shall have jurisdiction and power upon its own initiative, or upon complaint or request made to it in writing, to inquire into any matter relating to the producing, supplying, processing, handling, distributing or sale of milk and, subject to the approval of the Lieutenant-Governor, to make regulations with respect thereto or to any of the said matters. (REPEALED, 1935, Cap. 40, Sec. 5.)

Regulations.

(2) Without limiting or derogating from the generality of the foregoing, the board, with the approval of the Lieutenant-Governor in Council, may make regulations,—

(a) governing and supervising the producing, processing, handling, storing, hauling, delivering, distributing, keeping or offering for sale and the sale of milk, and all persons engaged or employed therein, and the reports and returns to be made by them to the board;

(b) requiring persons or classes of persons engaged or employed in the processing, handling, storing, hauling, delivering, distributing, keeping or offering for sale, or the sale of milk to be licensed and to fix the term of such licenses and the fees to be paid therefor;

(c) governing disputes and the determination of disputes arising between producers and distributors of milk, or between any two or more classes or branches of persons engaged in the milk industry as producers, processors, handlers, haulers, distributors or vendors of milk, or as being otherwise engaged in the said industry;

(d) governing agreements which may be entered into between producers of milk and other persons or classes of persons engaged in the milk industry. (REPEALED, 1935, Cap. 40, Sec. 5.)

Application of regulations.

(3) Any regulations made under the authority of this section may be general in their application or may be limited to any locality or localities, or to any persons or classes of persons, or to any branch of the milk industry mentioned therein. (REPEALED, 1935, Cap. 40, Sec. 5.)

Duty and powers of board.

3. IT SHALL BE THE DUTY OF THE BOARD AND IT SHALL HAVE POWER,—

(a) UPON ITS OWN INITIATIVE OR UPON COMPLAINT TO INQUIRE INTO ANY MATTER RELATING TO THE PRODUCTION, TRANSPORTATION, PROCESSING, DISTRIBUTION OR SALE OF MILK;

(b) TO ARBITRATE, ADJUST AND SETTLE DISPUTES ARISING BETWEEN PRODUCERS, CONSUMERS, PROCESSORS, DISTRIBUTORS AND TRANSPORTERS OF MILK OR BETWEEN ANY TWO OR MORE CLASSES OF SUCH PERSONS ENGAGED IN THE MILK INDUSTRY;

(c) TO PROHIBIT IN THE PROVINCE ANY SALE OR DELIVERY OF MILK OR OF CREAM OR OF MILK AND CREAM ALONE OR IN COMBINATION WITH ANY OTHER ARTICLE OF TRADE, AT A PRICE LOWER THAN THE CURRENT PRICE OF MILK OR CREAM OR OF A COMBINATION OF MILK OR CREAM WITH ANY OTHER ARTICLE;

(d) TO PROHIBIT MILK DISTRIBUTORS COMPELLING OR INDUCING PRODUCERS TO INVEST MONEY EITHER DIRECTLY OR INDIRECTLY IN A DAIRY PLANT OR OTHER EQUIPMENT IN ORDER THAT SUCH PRODUCERS MAY OBTAIN OR RETAIN A MARKET FOR THEIR MILK;

(e) TO PROHIBIT MILK DISTRIBUTORS FROM TERMINATING THE PURCHASE OF MILK FROM A PRODUCER WITHOUT JUST CAUSE (*UNLESS FIFTEEN DAYS' NOTICE IS GIVEN*);

AND IN EACH CASE SHALL MAKE SUCH ORDER AS IT DEEMS JUST, HAVING REGARD TO THE CIRCUMSTANCES. (1935, Cap. 40, Sec. 5; italicized words deleted 1937, Cap. 42, Sec. 2.)

Licenses required.

4. No person who is required by the regulations to be licensed under the authority of this Act shall engage or be employed in any branch of the milk industry without such license. (REPEALED, 1935, Cap. 40, Sec. 6.)

When issue of license prohibited.

4. NO LICENSE SHALL BE GRANTED TO A MILK DISTRIBUTOR UNLESS THE BOARD IS SATISFIED THAT THE APPLICANT IS QUALIFIED BY EXPERIENCE, FINANCIAL RESPONSIBILITY AND EQUIPMENT TO PROPERLY CONDUCT THE PROPOSED BUSINESS, AND THAT THE ISSUANCE OF THE LICENSE IS IN THE PUBLIC INTEREST. (1935, Cap. 40, Sec. 6.)

Power of board to refuse or revoke license.

4a. SUBJECT TO THE PROVISIONS OF SECTION 4 OF THIS ACT THE BOARD MAY REFUSE TO GRANT OR RENEW A LICENSE OR MAY SUSPEND OR REVOKE A LICENSE ALREADY GRANTED, AFTER DUE NOTICE AND OPPORTUNITY OF HEARING TO THE APPLICANT OR LICENSEE, WHEN THE BOARD IS SATISFIED OF THE EXISTENCE OF ANY ONE OR MORE OF THE FOLLOWING CONDITIONS:

(a) FAILURE TO OBSERVE, PERFORM AND CARRY OUT THE PROVISIONS OF THE MILK CONTROL ACT, 1934, OR OF THE MILK AND CREAM ACT, THE DAIRY PRODUCTS ACT, THE PUBLIC HEALTH ACT OR ANY OTHER ACT OF THE LEGISLATURE OF ONTARIO, OR OF THE DOMINION OF CANADA, OR AMENDMENTS THEREOF, OR OF ANY REGULATIONS MADE UNDER ANY SUCH ACT WHICH IN ANY WAY PERTAINS TO AND GOVERNS OR REGULATES THE SUPPLY OF MILK FOR HUMAN CONSUMPTION;

(b) FAILURE TO PROVIDE FOR AND CONTINUE IN EFFECT PROOF OF FINANCIAL RESPONSIBILITY AS REQUIRED BY THIS ACT OR THE REGULATIONS;

(c) FAILURE TO OBSERVE, PERFORM AND CARRY OUT ANY REGULATION OR ORDER OF THE BOARD MADE UNDER THIS ACT. (1935, Cap. 40, Sec. 7; underlined words added 1937, Cap. 42, Sec. 3.)

Compliance with the Act.

5. No person shall engage or be employed in any branch of the milk industry except as provided by and in accordance with this Act and the regulations.

Settlement of disputes.

6. No action may be brought respecting or for the determination of any dispute which by the ACT OR regulations is required to be determined by arbitration, and any such dispute shall be determined as provided for in the regulations. (Amended 1937, Cap. 42, Sec. 4.)

Appeal from decision of board.

6a. AN APPEAL SHALL LIE, BY WAY OF ORIGINATING NOTICE, FROM ANY ORDER OR DECISION OF THE BOARD UNDER SECTION 4 OR 4a OF THIS ACT TO A JUDGE OF THE SUPREME COURT WHO MAY RECEIVE SUCH EVIDENCE, GIVE SUCH DIRECTIONS FOR THE CONDUCT OF THE PROCEEDINGS, AND MAKE SUCH ORDER OR DECISION THEREON AS HE MAY DEEM JUST, AND HIS DECISION SHALL BE FINAL AND SHALL NOT BE SUBJECT TO APPEAL. (1935, Cap. 40, Sec. 7.)

Promulgation of regulations.

7. Every regulation made under this Act shall be published by the board in two successive issues of the *Ontario Gazette* and when so published shall while it remains in force, have the like effect as if enacted in this Act, and all courts shall take judicial notice thereof.

Rebates prohibited.

7a. NOTWITHSTANDING ANYTHING IN THE COMPANIES ACT OR IN ANY LETTERS PATENT OF INCORPORATION OR SUPPLEMENTARY LETTERS PATENT OR IN ANY OTHER GENERAL OR SPECIAL ACT CONTAINED, NO PERSON, FIRM OR CORPORATION SHALL GIVE OR DISTRIBUTE ANY FUND, REFUND, REBATE, INTEREST OR DIVIDEND TO ANY PUCHASER OF MILK THEREFROM, EITHER DIRECTLY OR INDIRECTLY IN RESPECT OF SUCH

PURCHASES OF MILK, EXCEPT SUCH INTEREST OR DIVIDEND AS MAY BE EARNED ON CAPITAL INVESTED BY SUCH PURCHASER IN SUCH FIRM OR CORPORATION. (1935, Cap 40, Sec. 7.)

Powers of board as to inquiry and report.

8. The board, or any person authorized by the board to make inquiry or report, may when it appears expedient,—

- (a) enter upon and inspect any land, place, building, works or other property;
- (b) require the attendance of all such persons as it or he thinks fit to summon and examine and take the testimony of such persons;
- (c) require the production of all books, records, plans, specifications, drawings, writings and documents;
- (d) administer oaths, affirmations or declarations and shall have the like powers to summon witnesses, enforce their attendance and compel them to give evidence and produce books, records, plans, specifications, drawings, writings and documents which it or he may require them to produce as is vested in the Supreme Court.

Board may approve agreements.

8a.—(1) WITHOUT DEROGATING FROM THE GENERALITY OF THE PROVISIONS OF SECTION 3 THE BOARD MAY, IF IT DEEMS IT IN THE PUBLIC INTEREST, (*AFTER CONSULTING ANY LOCAL MUNICIPAL OFFICER OR OFFICERS APPOINTED TO REPRESENT THE CONSUMERS' INTERESTS,* SUBJECT TO THE PROVISIONS OF SUBSECTION 1a, APPROVE ANY AGREEMENT RESPECTING THE PRICE OF MILK AND FAIR BUSINESS PRACTICES ENTERED INTO BETWEEN PRODUCERS, PROCESSERS, MILK DEALERS, TRANSPORTERS OF MILK AND DISTRIBUTORS OR ANY OF THEM, AND WHEN SO APPROVED, SUCH AGREEMENT SHALL BE BINDING UPON EVERY PERSON, PARTNERSHIP, ASSOCIATION OR CORPORATION, SELLING, DELIVERING OR BUYING MILK WITHIN THE LIMITS OF THE AREA AFFECTED BY THE AGREEMENT. (1935, Cap. 40, Sec. 7; italicized words deleted and underlined words added 1937, Cap. 42, Sec. 5(1).)

Representative of consumers.

(1a) THE COUNCIL OF ANY MUNICIPALITY MAY APPOINT A REPRESENTATIVE OF THE MILK CONSUMERS WITHIN SUCH MUNICIPALITY WHO, UPON NOTICE TO THE BOARD OF SUCH APPOINTMENT SHALL BE ENTITLED TO APPEAR BEFORE THE BOARD OR ANY PERSON AUTHORIZED BY THE BOARD TO MAKE INQUIRY, BEFORE ANY AGREEMENT AFFECTING MILK PRICES TO THE CONSUMERS WITHIN SUCH MUNICIPALITY IS APPROVED. (1937, Cap. 42, Sec. 5(2).)

Effect of approval.

(2) WHERE THE BOARD HAS APPROVED AN AGREEMENT RESPECTING THE PRICE OF MILK AND FAIR BUSINESS PRACTICES AS PROVIDED IN THIS SECTION, NON-COMPLIANCE WITH ANY OF THE PROVISIONS OF SUCH AGREEMENT SHALL BE A VIOLATION OF THIS ACT. (1935, Cap. 40, Sec. 7.)

Establishment of fund and charges.

8b. FOR THE PURPOSE OF CARRYING OUT ANY SCHEME OR PLAN FOR THE MARKETING OR REGULATING OF ANY MILK, THE BOARD MAY ESTABLISH A SEPARATE FUND AND MAY IMPOSE DIRECT CHARGES OR TOLLS IN RESPECT OF THE MARKETING OF THE WHOLE OR ANY PART OF SUCH MILK, WHICH CHARGES AND TOLLS SHALL BE PAYABLE BY SUCH PERSONS ENGAGED IN THE PRODUCTION OR MARKETING OF SUCH MILK AS THE BOARD MAY DETERMINE. (1937, Cap. 42, Sec. 7.)

Regulations.

9. The board, with the approval of the Lieutenant-Governor in Council, may from time to time make regulations respecting,—

(a) the meetings and proceedings of the board;

(b) the respective duties of the staff and of other persons employed by the board;

(c) the records, books and accounts to be kept by the board;

(d) the practice and procedure in all matters before the board and the conduct of all persons appearing before the board. (REPEALED, 1935, Cap. 40, Sec. 8.)

Regulations.

9.—(1) THE BOARD MAY MAKE SUCH REGULATIONS, WITH THE APPROVAL OF THE LIEUTENANT-GOVERNOR IN COUNCIL, AS IT DEEMS NECESSARY IN THE PUBLIC INTEREST, AND WITHOUT DEROGATING FROM THE GENERALITY OF THE FOREGOING MAY BY SUCH REGULATIONS,—

(a) SPECIFY THE TERMS AND CONDITIONS UPON WHICH A LICENSE MAY BE OBTAINED AND THE FEES PAYABLE THEREFOR AND THE PERSONS OR CLASSES OF PERSONS NOT REQUIRED TO BE LICENSED AS PROVIDED BY SECTION 2a OF THIS ACT;

(b) PRESCRIBE THE TERMS AND CONDITIONS UPON WHICH MILK MAY BE RECEIVED, HANDLED, TRANSPORTED, STORED, DELIVERED, SUPPLIED, PROCESSED, KEPT FOR SALE OR SOLD;

(c) CLASSIFY MILK PRODUCERS AND DISTRIBUTORS OR ANY OTHER PERSONS ENGAGED IN THE MILK INDUSTRY;

(d) REQUIRE PERSONS WHO SUPPLY, DISTRIBUTE, TRANSPORT, PROCESS, KEEP FOR SALE OR SELL MILK TO FURNISH TO THE BOARD SUCH INFORMATION AS THE BOARD MAY FROM TIME TO TIME REQUIRE;

(e) REQUIRE ANY APPLICANT FOR A LICENSE UNDER THIS ACT TO FURNISH PROOF OF FINANCIAL RESPONSIBILITY AND TO REQUIRE A BOND FROM SUCH APPLICANT IN SUCH AMOUNT AS THE BOARD MAY DEEM NECESSARY;

(f) PROVIDE FOR THE FORM OF ORDERS AND OTHER FORMS TO BE USED FOR THE PURPOSE OF THIS ACT;

(g) PRESCRIBE THE MEETINGS AND PROCEEDINGS OF THE BOARD;

(h) PRESCRIBE THE RESPECTIVE DUTIES OF THE STAFF AND OF OTHER PERSONS EMPLOYED BY THE BOARD;

(i) PRESCRIBE THE RECORDS, BOOKS AND ACCOUNTS TO BE KEPT BY THE BOARD;

(j) PRESCRIBE THE PRACTICE AND PROCEDURE IN ALL MATTERS BEFORE THE BOARD AND THE CONDUCT OF ALL PERSONS APPEARING BEFORE THE BOARD; (1935, Cap. 40, Sec. 8)

(k) PRESCRIBE MILK PURCHASE PLANS AND THE DATES OF PAYMENT FOR MILK PURCHASED FROM PRODUCERS;

(l) PRESCRIBE THE RECORDS TO BE KEPT BY DISTRIBUTORS, PROCESSORS AND TRANSPORTERS. (1937, Cap. 42, Sec. 6.)

Regulations may be general or limited.

(2) ANY REGULATIONS MADE UNDER THE AUTHORITY OF THIS SECTION MAY BE GENERAL IN THEIR APPLICATION OR MAY BE LIMITED TO ANY LOCALITY OR LOCALITIES, OR TO ANY PERSON OR CLASSES OF PERSONS, OR TO ANY BRANCH OF THE MILK INDUSTRY MENTIONED THEREIN. (1935, Cap. 40, Sec. 8.)

Prohibition against using milk containers.

9a. NO PERSON, OTHER THAN THE OWNER THEREOF, SHALL USE IN THE ORDINARY COURSE OF HIS BUSINESS ANY MILK BOTTLE, MILK CAN, MILK CASE OR ANY OTHER EQUIPMENT MARKED WITH THE NAME OF A MILK DISTRIBUTOR OR DAIRY. (1937, Cap. 42, Sec. 7.)

Annual Report.

10.—(1) The Board shall make an annual report in writing to the Minister of Agriculture not later than the 31st day of January in every year showing a record of the meetings and an abstract of its proceedings during the preceding calendar year and containing such other matters as appear to the board to be of public interest in connection with matters within its jurisdiction or which the Lieutenant-Governor in Council may direct.

To be laid before Assembly.

(2) Every such report shall be laid before the Assembly forthwith if then in session, or if not then in session, within fifteen days after the commencement of the next session.

Injunction proceedings.

10a.—(1) WHERE IT IS MADE TO APPEAR FROM THE MATERIAL FILED OR EVIDENCE ADDUCED THAT ANY OFFENCE AGAINST THIS ACT OR THE REGULATIONS HAS BEEN OR IS BEING COMMITTED, THE SUPREME COURT OR ANY JUDGE THEREOF MAY, UPON THE APPLICATION OF THE BOARD, ENJOIN—

(a) ANY PURCHASER, PROCESSOR, TRANSPORTER, DISTRIBUTOR OR DEALER IN MILK FROM CARRYING ON BUSINESS AS SUCH PURCHASER, PROCESSOR, TRANSPORTER, DISTRIBUTOR OR DEALER, ABSOLUTELY, OR FOR SUCH PERIOD AS SHALL SEEM JUST, AND ANY INJUNCTION SHALL IPSO FACTO CANCEL THE LICENSE OF ANY SUCH PURCHASER, PROCESSOR, TRANSPORTER, DISTRIBUTOR OR DEALER NAMED IN THE ORDER DURING THE SAME PERIOD.

Application may be ex parte

(2) THE APPLICATION OF THE BOARD UNDER SUBSECTION 1 MAY BE MADE WITHOUT ANY ACTION BEING INSTITUTED EITHER,—

(a) BY AN EX PARTE MOTION FOR AN INTERIM INJUNCTION WHICH SHALL, IF GRANTED, REMAIN IN FULL FORCE FOR TEN DAYS FROM THE DATE THEREOF UNLESS THE TIME IS EXTENDED OR THE ORIGINATING MOTION MENTIONED IN CLAUSE (b) HEREOF IS SOONER HEARD AND DETERMINED; OR

or by originating notice.

(b) BY AN ORIGINATING NOTICE OF MOTION WHICH, IF AN INTERIM INJUNCTION HAS BEEN GRANTED, SHALL BE SERVED WITHIN FIVE DAYS AND RETURNABLE WITHIN TEN DAYS FROM THE DATE OF SUCH INTERIM INJUNCTION. (1935, Cap. 40, Sec. 9.)

Penalties.

11. EVERY PERSON WHO VIOLATES ANY OF THE PROor of any regulation, rule or order made under this Act or of the board shall incur a penalty of not less than $5 for each offence, recoverable under The Summary Convictions Act. (REPEALED, 1935, Cap. 40, Sec. 10.)

11. EVERY PERSON WHO VIOLATES ANY OF THE PROVISIONS OF THIS ACT OR THE REGULATIONS, OR ANY ORDER MADE UNDER THIS ACT SHALL BE LIABLE, FOR A FIRST OFFENCE, TO A PENALTY OF $50; AND FOR A SECOND OR SUBSEQUENT OFFENCE TO A PENALTY OF NOT LESS THAN $100, NOR MORE THAN $500, RECOVERABLE UNDER THE SUMMARY CONVICTIONS ACT. (1935, Cap. 40, Sec. 10.)

Commencement of Act.

12. This Act shall come into force on a day to be named by the Lieutenant-Governor by his Proclamation.

APPENDIX 5

CONSOLIDATED MILK CONTROL ACT
R.S.O. 1937, Cap. 76

AND AMENDMENTS

(Note: Consolidate Act in small letters; amendments in capital letters.)

"Milk."

1. In this Act, unless the context otherwise requires, "milk" shall include whole milk and such products of milk as are supplied, processed, distributed or sold in any form other than butter and cheese.

Board constituted.

2.—(1) There shall be a board to be known as "The Milk Control Board of Ontario," hereinafter called the "board" which shall be a body corporate and have the powers and duties herein specified and the administration of this Act and the regulations.

Number of members.

(2) The Board shall consist of one or more members to be appointed by the Lieutenant-Governor in Council to hold office during pleasure and if more than one member is appointed, the Lieutenant-Governor in Council shall designate which one of them shall be the chairman of the board and any vacancies in the said board shall be filled by the Lieutenant-Governor in Council.

Quorum.

(2a) WHERE THE BOARD CONSISTS OF FOUR OR MORE PERSONS THREE MEMBERS SHALL CONSTITUTE A QUORUM. (1944, Cap. 36, Sec. 1.)

Remuneration, etc., of members.

(3) The member or members of the board shall receive such remuneration, allowances and expenses as may be determined by the Lieutenant-Governor in Council.

Appointment of officers, clerks, etc.

(4) The board may, with the approval of the Lieutenant-Governor in Council appoint and employ such officers, clerks and employees as may be necessary, and the remuneration of persons so appointed shall be determined by the Lieutenant-Governor in Council.

Expenses of Board.

(5) All moneys required for the purpose of this Act shall be paid out of any sum appropriated by the Legislature and voted by the Assembly for that purpose.

License required.

3.—(1) No person shall, directly or indirectly, engage in or carry on the business of supplying, distributing, transporting, processing or selling milk unless such person is the holder of a license issued by the board.

Exception.

(2) This section shall not apply to those persons or classes of persons designated by the board in regulations passed under the authority of this Act.

Duty and powers of board.

4.—(1) It shall be the duty of the board and it shall have power,—

(a) upon its own initiative or upon complaint to inquire into any matter relating to the production, transportation, processing, distribution or sale of milk;

(b) to arbitrate, adjust and settle disputes arising between producers, consumers, processors, distributors and transporters of milk or between any two or more classes of such persons engaged in the milk industry;

(c) to prohibit in the Province any sale or delivery of milk or of cream or of milk and cream alone or in combination with any other article of trade, at a price lower than the current price of milk or cream or of a combination of milk or cream with any other article;

(d) to prohibit milk distributors compelling or inducing producers to invest money either directly or indirectly in a dairy plant or other equipment in order that such producers may obtain or retain a market for their milk;

(e) To prohibit milk distributors from terminating the purchase of milk from a producer without just cause;

and in each case shall make such order as it deems just, having regard to the circumstances.

Administrative Duties.

(2) NOTWITHSTANDING ANY OTHER PROVISION OF THIS ACT THE CHAIRMAN OF THE BOARD MAY PERFORM SUCH OF THE DUTIES OF THE BOARD AS THE LIEUTENANT-GOVERNOR IN COUNCIL MAY PRESCRIBE. (1944, Cap. 36, Sec. 2.)

When issue of license prohibited.

5. No license shall be granted to a milk distributor unless the board is satisfied that the applicant is qualified by experience, financial responsibility and equipment to properly conduct the proposed business, and that the issuance of the license is in the public interest.

Power of board to refuse or revoke license.

6. Subject to the provisions of section 5 the board may refuse to grant or renew a license or may suspend or revoke a license already granted, after due notice and opportunity of hearing to the applicant or licensee, when the board is satisfied of the existence of any one or more of the following conditions,—

Rev. Stat., cc. 76, 302, 304, 299.

(a) failure to observe, perform and carry out the provisions of this Act or of *The Milk and Cream Act*, *The Dairy Products Act*, *The Public Health Act* or any other Act of this Legislature, or of the Parliament of Canada, or amendments thereof, or of any regulations made under any such Act which in any way pertains to and governs or regulates the supply of milk for human consumption;

(b) failure to provide for and continue in effect proof of financial responsibility as required by this Act or the regulations;

(c) failure to observe, perform and carry out any regulation or order of the board made under this Act.

Compliance with the Act.

7. No person shall engage or be employed in any branch of the milk industry except as provided by and in accordance with this Act and the regulations.

Settlement of disputes.

8. No action may be brought respecting or for the determination of any dispute which by the Act or regulations is required to be determined by arbitration, and any such dispute shall be determined as provided for in the regulations.

Appeal from decision of board.

9. An appeal shall lie, by way of originating notice, from any order or decision of the board under section 5 or 6 to a judge of the Supreme Court who may receive such evidence, give such directions for the conduct of the proceedings, and make such order or decision thereon as he may deem just, and his decision shall be final and shall not be subject to appeal.

Promulgation of regulations.

10. Every regulation made under this Act shall be published by the board in two successive issues of the *Ontario Gazette* and when so published shall, while it remains in force, have the like effect as if enacted in this Act, and all courts shall take judicial notice thereof.

Rebates prohibited.

11. Notwithstanding anything in *The Companies Act* or in any letters patent of incorporation or supplementary letters patent or in any other general or special Act contained, no person, firm or corporation shall give or distribute any fund, refund, rebate, interest or dividend to any purchaser of milk therefrom, either directly or indirectly in respect of such purchases of milk

except such interest or dividend as may be earned on capital invested by such purchaser in such firm or corporation.

Powers of Board as to inquiry and report.

12. The board, or any person authorized by the board to make inquiry or report, may, when it appears expedient,—

(a) enter upon and inspect any land, place, building, works or other property;
(b) require the attendance of all such persons as it or he thinks fit to summon and examine and take the testimony of such persons;
(c) require the production of all books, records, plans, specifications, drawings, writings and documents;
(d) administer oaths, affirmations or declarations and shall have the like powers to summon witnesses, enforce their attendance and compel them to give evidence and produce books, records, plans, specifications, drawings, writings and documents which it or he may require them to produce as is vested in the Supreme Court.

Board may approve agreements.

13.—(1) Without derogating from the generality of the provisions of section 4, the board may, if it deems it in the public interest, subject to the provisions of subsection 2 approve any agreement respecting the price of milk and fair business practices entered into between producers, processors, milk dealers, transporters of milk and distributors or any of them, and when so approved, such agreement shall be binding upon every person, partnership, association or corporation, selling, delivering or buying milk within the limits of the area affected by the agreement.

Representative of consumers.

(2) The council of any municipality may appoint a representative of the milk consumers within such municipality who, upon notice to the board of such appointment, shall be entitled to appear before the board or any person authorized by the board to make inquiry, before any agreement affecting milk prices to the consumers within such municipality is approved. (REPEALED, 1941, Cap. 31, Sec. 1.)

(2) THE COUNCIL OF ANY LOCAL MUNICIPALITY MAY BY BY-LAW APPOINT A REPRESENTATIVE OF THE MILK CONSUMERS WITHIN SUCH MUNICIPALITY AND UPON THE FILING OF A CERTIFIED COPY OF SUCH BY-LAW WITH THE BOARD, THE REPRESENTATIVE SHALL, BEFORE ANY AGREEMENT AFFECTING MILK PRICES PAYABLE BY THE CONSUMERS WITHIN SUCH MUNICIPALITY IS APPROVED, BE ENTITLED TO APPEAR BEFORE THE BOARD OR ANY PERSON AUTHORIZED BY THE BOARD TO MAKE INQUIRY.

Information to be furnished to representative.

(2a) THE BOARD SHALL FURNISH TO ANY REPRESENTATIVE APPOINTED UNDER SUBSECTION 2, INFORMATION IN THE POSSESSION OF THE BOARD RESPECTING THE PRODUCTION, TRANSPORTATION, PROCESSING AND DISTRIBUTION OF MILK SOLD WITHIN THE MUNICIPALITY WHEN SO REQUESTED BY THE REPRESENTATIVE. (1941, Cap. 31, Sec. 1.)

Effect of approval.

(3) Where the board has approved an agreement respecting the price of milk and fair business practices as provided in this section, non-compliance with any of the provisions of such agreement shall be a violation of this Act.

Establishment of fund and charges.

14. For the purpose of carrying out any scheme or plan for the marketing or regulating of any milk, the board may establish a separate fund and may impose direct charges or tolls in respect of the marketing of the whole or any part of such milk, which charges and tolls shall be payable by such persons engaged in the production or marketing of such milk as the board may determine. (REPEALED, 1944, Cap. 36, Sec. 3.)

Establishment of funds for producers' associations.

14. WHEN THE MINISTER OF AGRICULTURE RECEIVES FROM AN ASSOCIATION OF MILK PRODUCERS WHO ARE ENGAGED IN SUPPLYING MILK TO DISTRIBUTORS OR PROCESSORS IN ANY AREA A PETITION ASKING THAT FOR THE PURPOSE OF DEFRAYING THE EXPENSES OF SUCH ASSOCIATION EVERY PRODUCER ENGAGED IN SUPPLYING MILK TO DISTRIBUTORS OR PROCESSORS IN SUCH AREA BE REQUIRED TO PAY LICENSE FEES, THE MINISTER SUBJECT TO THE APPROVAL OF THE LIEUTENANT-GOVERNOR IN COUNCIL MAY, IF HE IS OF THE OPINION THAT SUCH ASSOCIATION IS FAIRLY REPRESENTATIVE OF THE PRODUCERS SO ENGAGED, MAKE AN ORDER

(a) REQUIRING EVERY PRODUCER SO ENGAGED TO PAY TO THE ASSOCIATION LICENSE FEES IN DIFFERENT AMOUNTS AND FIXING THE AMOUNTS OF SUCH FEES PAYABLE IN INSTALMENTS;

(b) REQUIRING EVERY PRODUCER AND DISTRIBUTOR WHO RECEIVES MILK FROM ANY SUCH PRODUCER TO DEDUCT THE AMOUNT OF THE LICENSE FEES OF SUCH PRODUCER FROM MONEYS PAYABLE TO THE PRODUCER AND TO PAY SUCH AMOUNT TO THE ASSOCIATION;

(c) PREVENTING THE ASSOCIATION FROM USING ANY SUCH AMOUNT FOR THE RETAIL OR WHOLESALE DISTRIBUTION OR PROCESSING OF MILK; AND

(d) REQUIRING THE ASSOCIATION TO FURNISH TO THE BOARD SUCH INFORMATION AND FINANCIAL STATEMENTS AS THE BOARD MAY DETERMINE. (1944, Cap. 36, Sec. 3.)

Regulations.

15.—(1) The board may make such regulations, with the approval of the Lieutenant-Governor in Council, as it deems necessary in the public interest, and without derogating from the generality of the foregoing may by such regulations,—

(a) specify the terms and conditions upon which a license may be obtained and the fees payable therefor and the persons or classes of persons not required to be licensed as provided by section 3;

(b) prescribe the terms and conditions upon which milk may be PURCHASED, received, handled, transported, stored, delivered, supplied, processed, kept for sale or sold; (Amended 1940, Cap. 28, Sec. 20.)

(c) classify milk producers and distributors or any other persons engaged in the milk industry;

(d) require persons who supply, distribute, transport, process, keep for sale or sell milk to furnish to the board such information as the board may from time to time require;

(e) require any applicant for a license under this Act to furnish proof of financial responsibility and to require a bond from such applicant in such amount as the board may deem necessary;

(f) provide for the form of orders and other forms to be used for the purpose of this Act;

(g) prescribe the meetings and proceedings of the board;

(h) prescribe the respective duties of the staff and of other persons employed by the board;

(i) prescribe the records, books and accounts to be kept by the board;

(j) prescribe the practice and procedure in all matters before the board and the conduct of all persons appearing before the board;

(k) prescribe milk purchase plans and the dates of payment for milk purchased from producers;

(l) prescribe the records to be kept by distributors, processors and transporters.

Regulations may be general or limited.

(2) Any regulations made under the authority of this section may be general in their application or may be limited to any locality or localities, or to any person or classes of persons, or to any branch of the milk industry mentioned therein.

Prohibition against using milk containers.

16. No person, other than the owner thereof, shall use in the ordinary course of his business any milk bottle, milk can, milk case or any other equipment marked with the name of a milk distributor or dairy. (REPEALED, 1946, Cap. 89, Sec. 29.)

Annual Report.

17.—(1) The board shall make an annual report in writing to the Minister of Agriculture not later than the 31st day of January in every year showing a record of the meetings and an abstract of its proceedings during the preceding calendar year and containing such other matters as appear to the board to be of public interest in connection with matters within its jurisdiction or which the Lieutenant-Governor in Council may direct.

To be laid before Assembly.

(2) Every such report shall be laid before the Assembly forthwith if then in session, or if not then in session, within fifteen days after the commencement of the next session.

Injunction proceedings.

18.—(1) Where it is made to appear from the material filed or evidence adduced that any offence against this Act or the regulations has been or is being committed, the Supreme Court or any judge thereof may, upon the application of the board, enjoin any purchaser, processor, transporter, distributor or dealer in milk from carrying on business as such purchaser, processor, transporter, distributor or dealer, absolutely, or for such period as shall seem just, and any injunction shall ipso facto cancel the license of any such purchaser, processor, transporter, distributor or dealer named in the order during the same period.

Application may be ex parte.

(2) The application of the board under subsection 1 may be made without any action being instituted either,—

(a) by an ex parte motion for an interim injunction which shall, if granted, remain in full force for ten days from the date thereof unless the time is extended or the originating motion mentioned in clause (b) hereof is sooner heard and determined; or

or by originating notice.

(b) by an originating notice of motion which, if an interim injunction has been granted, shall be served within five days and returnable within ten days from the date of such interim injunction.

Penalties.

19. Every person who violates any of the provisions of this Act or the regulations, or any order made under this Act shall be liable, for a first offence, to a penalty of $50; and for a second or subsequent offence, to a penalty of not less than $100, nor more than $500, recoverable under *The Summary Convictions Act*.

APPENDIX 6

MILK CONTROL BOARD OF ONTARIO
HISTORY OF PRICES IN MARKETS UNDER CONTROL

	1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946	
	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP
Acton													11	1.80	12	2.35								
Arnprior			9	1.50									10	1.80	11	2.10								
Aurora-Richmond Hill Newmarket					11	1.85							12	2.20		2.35								
Aylmer											10	1.70			11	2.00								
															12	2.25								
																2.35								
Barrie			11	1.80	11	2.00							12	2.25		2.35								
Belleville	9	1.60			10	1.80							12	2.25		2.35								
Bowmanville-Newcastle													11	2.00	12	2.25								
																2.35								
Brampton					10	1.75	10	1.80					11	2.05	12	2.35								
Brantford			11	1.90									12	2.25		2.35								
Brockville					10	1.75					11	2.00	12	2.25		2.35								
Campbellford											10	1.80			11	2.05								
															12	2.35								
Chesley															12	2.35								
Cobourg					10	1.75		1.80					11	2.05	12	2.25								
																2.35								
Cochrane							12½	2.35							13	2.65								
Collingwood-Stayner	9	1.50			10	1.85							11	2.05										
													12	2.25		2.35								
Cornwall			10	1.75			11	1.95					11	2.00										
													12	2.25		2.35								
Delhi											11	1.92			12	2.25								
																2.35								
Dryden													12		13	2.70								
Dunnville															12	2.35								
Essex													12	2.35										
Fergus									10	1.80			11	2.00	12	2.35								

	1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946	
	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP
Fort Frances												2.00			13	2.65								
Fort William			11	2.05							12	2.35			13	2.65								
Galt									11	1.91			12	2.25		2.35								
Gananoque	9	1.61											12	1.91		2.25								
																2.35								
Georgetown																2.25								
																2.35								
Goderich							10	1.75					11	2.00	12	2.25								
																2.35								
Guelph	11	1.90											12	2.25		2.35								
Hamilton			12	2.15									12½	2.35		2.50								
Harrow													12	2.10		2.35								
Hawkesbury															10	2.00								
													9	1.60	11	2.35								
Hespeler													11	2.00	12	2.30								
																2.35								
Ingersoll			10	1.75							11	1.92			12	2.25								
																2.35								
Kenora							11	2.00					12	2.20	13	2.50								
Kent County			10	1.65									12	2.25		2.35								
			11	1.92																				
Kingston	10	1.60		1.75							11	1.92	12	2.25		2.35								
Kingsville													12	2.10		2.35								
Kirkland Lake	14	2.35										2.50			13	2.65								
Kitchener			11	2.00									12	2.25		2.35								
Leamington						1.80		1.95					12	2.10		2.35								
								2.05																
Lindsay	10	1.76											11	2.05	12	2.35								
Listowel														1.60										
													11	1.90				2.10						
London			11	1.92									12	2.25		2.35								
Manitoulin																2.35							12	
Midland											11	1.80		2.05		2.35								
													12	2.10										
Milton															12	2.10								
																2.35								

	1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946	
	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP
Morrisburg-Williamsburg Iroquois-Cardinal															11	2.05		2.10						
Muskoka-Parry Sound Area													12	2.25		2.35								
(a) Bracebridge	10	2.00																						
(b) Huntsville			10	1.80							11	1.90												
(c) Gravenhurst							12	2.00																
(d) Muskoka Area									12															
Napanee																		2.10			11			
Niagara Peninsula													12½	2.35		2.50								
(a) Port Colborne			11	1.90																				
			12	2.15																				
(b) Niagara Falls			11	1.90																				
			12	2.15																				
(c) St. Catharines			12	2.15																				
(d) Fort Erie			12	2.15																				
(e) Welland			12	2.15																				
(f) Grimsby									12	2.15														
(g) Thorold-Merritton									11	1.90														
North Bay	11	1.85																						
	12	2.15	11	1.85	12	2.15							13	2.45		2.65								
Orangeville					10	1.70							11	2.00	12	2.35								
Orillia							11	1.90					12	2.25		2.35								
Oshawa								1.95					12	2.28		2.35								
											(f.o.b. farm)													
Ottawa	10	1.56									12	2.05			(f.o.b. dairy)									
	11	1.85										2.10				2.35								
Owen Sound					11	1.80							12	2.05		2.35								
Paris			10	1.75									11	2.00	12	2.25								
																2.35								
Pembroke	9	1.80			10	2.00							11	2.25							12	2.45		
Perth											10	1.80			11	2.05								
															12	2.35								
Peterborough	10	1.71	11	2.00									12	2.25		2.35								
Petrolia										1.75			11	2.00	12	2.25								
																2.35								

	1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946	
	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP	CP	PP
Picton						1.40	9	1.65					10	1.90	11	2.20								
Port Hope			9	1.60	10	1.75							11	2.05	12	2.25								
																2.35								
Prescott											10	1.75	11	2.00	12	2.25								
																2.35								
Preston			11	1.90					11				12	2.25		2.35								
Renfrew					9	1.75							10	2.00	11	2.25					12	2.50		
St. Mary's			9	1.50	10	1.80					11	2.00			12	2.25								
																2.35								
St. Thomas	10	1.60	11	1.92									11	2.00										
													12	2.25		2.35								
Sarnia			11	1.92									12	2.25		2.35								
Sault Ste. Marie			11	1.90	12	2.15							13	2.45		2.65								
Simcoe-Waterford															12	2.25								
																2.35								
Smiths Falls	9	1.50			10	1.75							11	2.00	12	2.35								
Southampton-Port Elgin													11	2.00	12	2.35								
South Temiskaming									11	2.00			12	2.25	13	2.65								
Stouffville-Markham Unionville															12	2.25								
																2.35								
Stratford			10	1.68																				
			11	1.92									12	2.25		2.35								
Strathroy							10	1.75							11	2.10	12	2.35						
Sudbury	12	2.00			13	2.50										2.65								
Sutton-Beaverton															12	2.35								
Tillsonburg			10	1.70							10	1.75			12	2.25								
																2.35								
Timmins			14½	3.31							11	3.24												
Toronto	12	2.10			12½	2.25																		
					12	2.10																		
					13	2.32	12	2.10					13	2.40		2.50								
Trenton	9	1.50					10	1.80					12	2.25		2.35								
Whitby											11	1.95	12	2.28		2.35								
Wiarton					9	1.70					10	1.80	11	2.10	12	2.35								
Windsor			12	2.20				2.15					13	2.45		2.55								
Woodstock			10	1.65									12	2.25		2.35								
			11	1.92																				

APPENDIX 7

PRODUCER FUNDS RECOVERED BY MILK CONTROL BOARD

Year	Calling Bonds	Adjustments Ordered	Total
1939	$12,177.57	$ 2,200.00	$14,377.57
1940	1,500.00	12,088.03	13,588.03
1941	3,409.44	6,834.69	10,244.13
1942	1,048.13	2,245.91	3,294.04
1943	15,017.47	5,301.25	20,318.72
1944	1,500.00	13,131.28	14,631.28
1945	4,463.29	11,789.94	16,253.23
1946	669.84	8,472.75	9,142.59
Totals	$39,785.74	$62,063.85	$101,849.59

The above record does not include the early years of control. There were some bonds called but the record was not kept separately.

The recovery over the years has amounted to quite an impressive sum of money. However, the protection to the producer should not be measured by the actual recovery of producer funds. The real value in the bond requirements to a license lies in the salutary effect it has. There are numerous cases where dairies, rather than have their bond called, have raised money from other sources to meet producer accounts.

APPENDIX 8

STATISTICAL MATERIAL CHICAGO MARKETING AREA

The index only of this summary has been included to demonstrate the type of statistical material considered essential by the United States Department of Agriculture when fixing prices. The actual tables which relate to the Chicago area are not of general value to Ontario readers and because they are voluminous have not been reproduced. Any persons interested in the tables themselves may secure a full copy by writing to the United States Department of Agriculture, Washington, D. C.

COMPILATION OF STATISTICAL MATERIAL
PERTAINING TO THE
PROPOSED AMENDMENTS TO
FEDERAL ORDER 41, ORIGINAL AND AS AMENDED,
FOR THE CHICAGO, ILLINOIS, MARKETING AREA
AND
FEDERAL ORDER 69, ORIGINAL AND AS AMENDED,
FOR THE SUBURBAN CHICAGO, ILLINOIS, MARKETING AREA

March 1947

Prepared by the Dairy Branch Production and Marketing Administration,
United States Department of Agriculture

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APPENDIX 9

BY-LAW No. 2990

A BY-LAW TO REGULATE AND LICENSE THE PRODUCTION, SALE AND DISTRIBUTION OF MILK, CREAM AND MILK PRODUCTS.

INTERPRETATION

1. In this By-Law:
   (a) "License" shall mean a license to sell milk or cream or milk products for human consumption;
   (b) "Council" shall mean the Municipal Council of the City of Brantford;
   (c) "Medical Officer of Health" shall mean a medical officer of health for the county of Brant;
   (d) "Sanitary Inspector" shall mean a sanitary inspector for the County of Brant;
   (e) "Pasteurized" shall mean milk or cream which has undergone the process of pasteurization;
   (f) "Pasteurization" shall mean the process of heating every particle of milk to a temperature of not less than 143 degrees Fahrenheit, of holding it at such temperature for not less than 30 minutes, or such other temperature and time as may be set by Lieutenant-Governor in Council and of cooling it immediately thereafter to 50 degrees Fahrenheit or lower. Public Health Act, R.S.O. 1937, Chapter 299, sec. 1(00).)

LICENSE REGULATIONS

2. No person shall sell or offer for sale, milk or cream for human consumption in the City of Brantford or directly to the consumer or shops or stores or in wholesale quantities to any person to be afterwards sold or delivered by such person to the consumer without first obtaining a license under the provisions of this By-Law.

3. Every person proposing to apply for such license shall apply to the Clerk of the municipality of the City of Brantford. Before issuing such license it shall be the duty of the Clerk to give the Medical Officer of Health the name of the applicant and his address in order that inspection may be made of the premises and equipment for the purpose of ascertaining whether they conform to the requirements of the Milk and Cream Act, this By-Law and other statutes applicable to dairies, the production or sale of milk or cream or milk products.

4. No license shall therefore be granted or issued until the Clerk shall have first obtained the signed approval from the Medical Officer of Health. Similarly the Medical Officer of Health shall be notified of any transfers of licenses.

5. It shall be the duty of the Medical Officer of Health:
   (a) To ascertain the truth of all particulars accompanying such applications;
   (b) To cause an inspection to be made of all premises in connection with which any license is applied for;
   (c) To satisfy himself as to the character of all applicants for licenses;
   (d) To keep full particulars of every application and transfer issued;
   (e) To furnish all necessary forms and to make out and sign all applications and transfers;
   (f) To inspect all premises, the owners or occupants of which are licensed under this By-Law;
   (g) To cause all persons who offend against any of the provisions of the Milk and Cream Act or of this By-Law or of any amendments thereof to be prosecuted whenever information to that end shall come to his knowledge;

6. A separate license shall be taken out for each place or premises at which the applicant carries on his business or a part thereof.

7. Every license, unless it is expressed to be issued for a shorter period, or unless it shall become sooner forfeited, shall be for the year current at the date thereof, and shall expire on the last day of December after the date thereof, and in this By-Law for the year current shall mean a period commencing on the first day of January, 1947, and ending on the 31st day of December, 1947.

8. Every person possessing a license and his servant or employee employed in selling milk or cream shall produce and exhibit the license thereof whenever required by the Medical Officer of Health, or other officials of the Brant County Health Unit, or by any police constable.

9. The Medical Officer of Health may, in his discretion, refuse or suspend any license, subject however to review by the Council.

10. Except so far as authorized by Sec. 4, a license shall not be transferable.

11. The Medical Officer of Health may grant a license to the representative of a license holder who dies or makes an assignment for the benefit of creditors during the currency of the license, to continue the business until expiration of his license.

REGULATIONS REGARDING THE PRODUCTION OF MILK

12. (a) *Care of Milk Cows*: Milk cows must be kept clean and shall not be abused in any way. Udders and flanks shall be clipped twice yearly. The teats and udders of such cows are to be wiped with a damp cloth before each milking so as to remove thoroughly from them all manure and foreign substance which may contaminate the milk.

(b) *Health of Cows*: No milk shall be sold, held for sale or offered for sale from any milk cow that has any ailment that would affect the quality or wholesomeness of the milk and any cow subject to such ailment shall be removed and kept separated from the milking herd.

(c) *Food for Cows*: Only clean wholesome food shall be given to milk cows. No strong flavoured food which shall affect the odor or taste of the milk shall be fed to milk cows at any time.

(d) *Water for Cows*: All water supplied or available to milk cows for drinking and all water used in cleansing utensils, must be clean, pure and protected from any danger of pollution.

(e) *Sanitary Conditions of Stables:* The stable in which milk cows are kept or in which they are milked must be kept clean and in a sanitary condition. It must be provided with an adequate supply of light; it must be well ventilated, and free from dust and cobwebs; it must be provided with an efficient manure gutter, which must be kept properly cleaned night and morning, the floor made tight and be provided with proper slope for drainings, no pigs kept in the stable, the walls and ceilings of the stable shall be whitewashed each spring and autumn.

(f) *Milk House*: A milk room separate from the other rooms must be provided which shall be used only for the purpose of storing milk and milk utensils. It shall be so constructed as to be kept clean, cool and sanitary at all times. Cement floors shall be used and shall be properly drained towards an outlet. Milk coolers shall likewise be made of cement, shall be so constructed as to be kept clean and in a sanitary condition and in a good state of repair. Where water is used to cool the milk it shall be clean, pure and protected from any danger of pollution. Windows and doors shall be suitably constructed and screened during the fly season. There must be no direct communication between it and the stable, or any living room, or where manure is piled.

(g) *Excluded Milk*: No milk shall be forwarded to the municipality of the City of Brantford for sale obtained from any cow within six weeks before and 10 days after parturition. Likewise, no milk shall be allowed to enter the municipality of the City of Brantford which is ropey, has an off-flavour or a bitter flavour, is dirty or adulterated, or which has any other abnormality.

(h) *Small Animals*: Cats and dogs must be excluded from milk houses and cow stables during milking hours.

(i) *Persons engaged in milking*: Every person engaged in milking cows must be in good health, be free from contagion of any kind, must be cleanly dressed, and must be personally clean at the time of milking and of handling the milk in the milk house.

Any person milking cows, and in whose family any contagious disease occurs, must absent himself or herself at once from the dairy and stable until the Medical Officer of Health certifies that it is safe for him or her to return.

(j) *Utensils and Cooling*: All milk utensils must be kept thoroughly clean and sterilized before use, and the process of milking and of handling milk in stable and milk house be such as will ensure a supply of clean, fresh milk.

(k) *Premises*: All yards and premises adjoining cow stables and milk houses shall be maintained in a sanitary condition. No manure dirt, nor decayed matter shall be allowed to accumulate in such yards or premises or milk houses, or within fifty feet of the same, and shall be removed at frequent intervals.

Milk shall not be allowed to stand in the stable but shall at once be removed to the milk house, strained through a sterilized gauze and cooled to a temperature of fifty degrees Fahrenheit and kept at or below that temperature until shipped.

13. All persons selling, holding for sale or offering for sale, cream or milk within the City of Brantford or owning or operating dairies within the limits of the City of Brantford shall comply with and observe and perform the regulations as set down by the Ontario Department of Health, on Regulations of Milk Pasteurization Plants.

14. The Medical Officer of Health shall be the person to enforce the provisions of the Milk and Cream Act and this By-Law and of any regulations enacted by the Council under the authority of the said Act, and for such purposes he shall have and may exercise all the powers conferred by the Milk and Cream Act and any amendment thereof.

If upon examination and inspection any milk or cream appears to the Medical Officer of Health to be dirty, adulterated or in any way unfit for human consumption, he shall treat, destroy or cause to be destroyed, as he may see fit, all such milk so as to prevent it from being exposed for sale or used for human consumption.

Cream shall contain 18% butter fat and no milk shall be sold as cream containing lesser per cent of butter fat unless such lesser per cent is clearly shown upon the vessel from which such cream is supplied.

15. All dairymen and vendors of milk, cream, and all drivers of milk wagons and vehicles having milk or cream in their possession at the time, shall furnish the Medical Officer of Health with such samples as he may require from time to time and at such places as the samples may be demanded. All milk wagons and motor vehicles used to transport milk either to the dairy, or in the delivery to the consumer or vendor, shall be so constructed and maintained so as at all times to be in a sanitary condition.

16. The Medical Officer of Health shall properly identify all such samples of milk and cream for laboratory examinations.

17. On receipt of the laboratory report the Medical Officer of Health shall notify the dairy and he shall take such action as to him seems necessary through information gained from the report.

18. Every person vending or offering milk or cream for sale in the City of Brantford shall give full information to the Medical Officer of Health as to the source of his supply and shall not sell milk or cream from any source condemned by the Medical Officer of Health and shall notify the Medical Officer of Health within 24 hours upon taking on or discontinuing any supply of milk or cream.

19. The onus of proof that milk seized under this By-Law was not intended for sale in the City of Brantford shall be upon the party charged.

PENALTIES

Any person contravening any of the provisions of this By-Law shall incur a penalty of not less than $1 nor more than $50 recoverable under The Summary Convictions Act.

Passed this Twenty-third day of September, 1946.

Sgd. E. J. Campbell,
City Clerk.

Sgd. J. H. Matthews.
Mayor.

I hereby certify that the foregoing is a true, accurate and correct copy of By-Law No. 2990 of the City of Brantford, passed on the Twenty-third day of September, 1946.

Sgd. E. J. Campbell,
City Clerk.

The provisions of By-Law No. 2990 of the City of Brantford which have been passed under section 2 of The Milk and Cream Act are hereby approved. Dated at Toronto this Twenty-first day of October, 1946.

Sgd. Thomas L. Kennedy,
Minister of Agriculture.

APPENDIX 10

THE LOCAL BRANCHES OF THE ONTARIO MILK PRODUCERS' LEAGUE

The membership of the League is divided into districts or markets known as "locals" as follows:

- Algoma
- Acton
- Aylmer
- Barrie
- Brantford
- Blenheim
- Belleville
- Bracebridge
- Brampton
- Brockville
- Bowmanville
- Campbellford
- Chatham
- Cobourg
- Collingwood
- Cornwall
- Durham
- Delhi
- Elmira
- Essex
- Fort Frances
- Galt
- Gananoque
- Georgetown
- Guelph
- Gravenhurst
- Hamilton
- Hanover
- Ingersoll
- Kenora
- Kingston
- Lindsay
- Lincoln
- London
- Midland-Penetang
- Niagara Falls
- North Bay
- North Muskoka
- Orillia
- Oshawa
- Ottawa
- Oakville
- Owen Sound
- Paris
- Peterboro
- Pickering
- Picton
- Port Elgin and Southampton
- Port Hope
- Port Colborne
- Prescott
- Renfrew
- Ridgetown
- St. Marys
- St. Thomas
- Sarnia
- Simcoe-Waterford
- Smiths Falls
- Stratford
- Thunder Bay (Port Arthur and Fort William)
- Tillsonburg
- Temiskaming
- Thorold-Merritton
- Toronto
- Trenton
- Twin Cities (Kitchener and Waterloo)
- Walkerton
- Wallaceburg
- Woodstock
- Wiarton
- Welland
- Whitby

APPENDIX 11

PROBLEMS OF THE DAIRY FARMER'S WIFE AS PRESENTED TO THE ROYAL COMMISSION

December 16, 1946

The dairy farmer's wife is an "Active" partner with her husband and family in carrying on the work of a dairy farm, and therefore I feel has a right to make representation to you, Sir. She is up and on the job early in the morning. She takes charge of her kitchen range and the furnace in the basement. She often finds it necessary to go to the stable to assist in milking the cows, taking with her one or two young children, whom she cannot leave alone, and placing them in a box or cage, where she can keep an eye on them while she works. She hurries back to her kitchen when milking is completed to prepare breakfast for her husband and his hired men, as the majority of the milk for Ottawa leaves the farm by truck after being cooled before 7.00 a.m.

Her morning's work has just begun. She now tackles the job of cleaning and sterilizing dishes, pails, cans, milking machine, etc., before she can turn to the task of setting her house in order. This task in itself is not an easy one. Her scrubbing and sweeping and dusting and making beds must be done before she can turn to the task of preparing dinner for her family and hired men whom of necessity she must board, house and, worst of all, do their laundry.

Early afternoon may be free from the mad rush of the morning's work. This part of the day is devoted to catching up with the million odds and ends that have been neglected, besides the ironing and sewing and mending that are a necessary part of her day's work.

Late afternoon, however, finds her often again in the stable. Dressed in overalls and smock, and keeping a watchful eye on her babies in their cage, she spends a couple of hours milking cows and cleaning dairy utensils.

She then prepares and serves supper to her family and hired men. More dishes are to be washed; and many neglected odd jobs occupy most of her evenings. This does not allow Saturday afternoon free, the cows are a seven day care.

The life of a dairy farmer's wife is hard. Her hours are long; her work arduous and often distasteful. Necessity drives her beyond her strength to her humdrum tasks 365 days in the year. There is no let-up—little diversion. She cheerfully gives her life that others may be fed. She occasionally goes to town—sees men and women and boys and girls lined up at the beer store. She wonders why they complain so much about paying fifteen cents for a quart of milk when they so gladly pay thirty-five cents for a quart of beer or similar amounts for soft drinks, etc.

She is not paid commensurate with this work. Income tax officials will not allow it as an expense against income. Yet it enters directly into the cost of producing milk.

The dairy farmer's wife has a real problem in the matter of housing labourers. Sometimes he is a fine agreeable fellow; often he is quite the reverse. No matter what he is, she sees him by force of circumstances admitted to the intimacies of her children's conversation at meal-time and in the evenings. She hesitates to leave them alone in his company. She smarts under the injustice of having him monopolize the living room and the radio, yet she feels she cannot protest. Her husband needs him, and the work must be done.

The necessity of living and working under circumstances that are not pleasant when compared with those of her sisters who have married professional men, business men, mechanics, or labourers has a psychological effect on the dairy farmer's wife. Few seem to understand. No one seems capable of evolving a solution. In bitterness of heart, she resolves that her daughter will not be as she. She encourages her to leave the farm, to seek a career in the city. And thus the drift from farm to town goes on from decade to decade, and it will continue until the farmer receives a price for his produce that will enable him to pay wages that will attract labour to the farm and will enable him to provide separate and comfortable living quarters for married help.

The lowest paid labourer's wife in the city has more conveniences than many or most of the dairy farmer's wives. The conveniences were denied many farmer's wives not for lack of desire of her loving husband but because of lack of finances.

I am a farmer's wife by choice. There are many things I like about it and all I ask is that a fair price or return for our labour be assured us and I will be happy to see my children follow their father's business, but one hesitates to persuade them when you can promise them so little except fresh air and a good night's sleep.

One thing that seldom has been considered in farming is holidays. City people feel because they holiday in the country the farmers are always so privileged. Help on the farm is seldom provided to allow for a spare. Urban industries find it necessary to do so and charge this cost to overhead. If one leaves the farm or is ill the remaining help must do his work. This is generally passed on to Mrs. Farmer. Few farmers' wives can allow themselves holidays either for lack of help or money to enjoy such.

Sir, in conclusion may I ask you to study this matter in your wisdom, but particularly blend your findings with the facts that farm women should have and would like the possibility of a little nail polish, an occasional permanent, and perhaps a tiled bathroom. This, Sir, can never be ours if milk goes back to former prices, and if my daughter refuses to marry a farmer for fear of lack of those things every lady loves, it is going to be bad for the future of Ottawa and Canada. The lack of ability to live with conveniences on a farm has made many a girl break a romance and left farms deserted while the boy turned to city employment. We only want our share of the nation's wealth, no more—no less.

APPENDIX 12

FARM EXPENSES HAVE RISEN SHARPLY SINCE 1939

The dairy farmer has many items of expenditure, both for commodities used in farm production and also for articles needed for the maintenance of his household.

The Dominion Bureau of Statistics publishes two valuable indexes which show the changes in prices for these two groups of expenditures. One index showing the prices of commodities used in farm production in eastern Canada indicates a rise from 98.9 for the year 1939 to 150.2 in August 1946. This index comprises implements, fertilizers, seed, feed, gasoline and oil, building materials, hardware, binder twine, taxes, interest on mortgages, and farm wages.

It is common knowledge that prices of food, clothing, fuel, furniture, and other household items have advanced greatly, and the farmers' income has definitely much less purchasing capacity in respect to purchases of this type than in 1939. Clothing in general has risen 38.3% since 1939, fuel is up 19% notwithstanding the fact that it is still subsidized, and household equipment 36%. Wages of industrial employees have been progressively raised to cope with the increase in the prices of these commodities, and it is just as necessary that dairy farmers also obtain corresponding improvement in their income.

PRICE INDEXES OF COMMODITIES AND SERVICES USED BY FARMERS IN EASTERN CANADA—1935-39 = 100

Year	Composite Index	Implements	Fertilizers	Seed	Feed	Gasoline, Oil, Grease	Building Materials	Hardware	Binder Twine	Taxes	Interest on Mortgages	Wages
1939	98.9	104.3	107.2	82.4	81.0	100.1	108.1	102.0	93.8	101.1	95.0	108.5
1944 August	142.6	117.2	108.0	135.3	123.3	130.6	173.4	118.8	126.4			255.4
1945 January	140.6	113.5	108.0	137.6	125.3	129.7	173.9	118.8	126.4	107.0	90.5	242.3
April	143.3	113.5	108.0	138.8	126.2	129.7	173.7	118.9	126.4			263.1
August	146.9	113.5	108.0	139.5	126.3	129.7	174.2	118.9	126.4			289.1
1946 January	143.9	113.5	108.0	141.8	125.8	129.7	174.4	118.9	126.4	107.0	90.5	263.2
April	148.0	120.8	108.0	142.6	126.0	129.7	174.8	120.8	126.4			289.3
August	150.2	120.8	110.1	141.8	126.8	129.7	175.7	123.2	126.4			303.3

GROUP INDEX NUMBERS OF FARM FAMILY LIVING COSTS IN EASTERN CANADA—1935-39 = 100

Year	Composite Index	Food	Clothing	Fuel	Household Equipment	Health Maintenance	Miscellaneous
1939	99.5	96.4	100.2	98.9	101.0	100.8	100.6
1944 August	122.3	134.2	127.7	116.2	124.4	109.3	105.1
1945 January	122.5	134.1	127.7	116.2	124.4	111.7	105.1
April	122.8	134.0	127.7	118.4	125.3	111.8	105.1
August	123.6	134.6	129.3	118.4	126.1	112.8	105.1
1946 January	124.6	135.6	129.3	118.9	126.1	115.4	107.9
April	126.1	137.0	130.4	118.9	131.1	115.7	107.9
August	130.6	140.1	138.5	118.9	137.6	116.3	110.8

Prices Branch, Dominion Bureau of Statistics, Ottawa,

AVERAGE RETAIL PRICES IN ONTARIO OF COMMODITIES USED BY FARMERS

AUGUST, 1939, AUGUST, 1945 and AUGUST, 1946

	August 1939	August 1945	August 1946
Average wages of farm help, with board	$24.00	$64.34	$68.40
Motor Supply			
Gasoline . . . . . per gallon	.28	.345	.345
Motor Oil . . . . . per gallon	1.26	1.34	1.34
Building Materials			
Spruce scantling . . . . . M	41.19	64.83	65.00
Shingles (cedar) . . . . . bundle	1.20	1.80	1.78
Brick . . . . . M	24.93	33.33	35.00
Portland cement . . . . . bag	.67	.73	.73
Window glass . . . . . sq. foot	.11	.15	.16
Roofing paper . . . . . roll	2.57	2.95	2.97
Feed			
Oats . . . . . bushels	.42	.65	.65
Barley . . . . . bushels	.59	.84	.83
Corn . . . . . bushels	.85	1.37	1.46
Wheat . . . . . bushels	.73	1.10	1.12
Bran . . . . . cwt.	1.20	1.45	1.45
Middlings . . . . . cwt.	1.35	1.66	1.66
Hay . . . . . ton	11.79	20.50	19.81
(A) 1. Linseed Oil Cake Meal . . . . cwt.	2.00	—	2.25
2. 24% Dairy Ration . . . . . cwt.	2.45	—	2.70
3. 16% Dairy Ration . . . . . cwt.	2.30	—	2.35
(A) Fertilizers			
2-12-6	29.25	29.00	31.20
0-12-6	25.75(0-14-7)	27.75(0-14-7)	30.35
Hardware			
Milk Can . . . . . 8 gallons	6.53	8.43	8.52
Dairy Pail	.74	.83	.88
Wire fencing . . . . . per rd.	.50	.51	.57
Implements			
Tractor, 4 cylinder, 9-38', 4-ply tires	974.00	1,048.00	Prices were advanced generally 12 ½% in 1946
Plow	21.00	23.00	
Binder	256.00	300.00	
Drill	168.00	187.00	
Rake	57.00	63.00	
Drag Harrow	26.00	28.00	
Disc Harrow	56.00	62.00	

(A)—U.F.O prices

Agricultural Division, Dominion Bureau of Statistics, Ottawa.

CONSUMERS HAVE HIGHER INCOMES AND CAN AFFORD TO PAY SUFFICIENT FOR MILK TO ASSURE FARMERS COST OF PRODUCTION

Urban residents have considerably more money to-day than in 1939, and have benefited greatly from improved economic conditions. The index of employment compiled by the Dominion Bureau of Statistics, Ottawa, indicates the higher level of industrial activity prevailing to-day. In the city of Hamilton the index of employment, base 1926=100, has risen from 103.7 in 1939 to 175.9 in July 1946.

The Dominion Bureau of Statistics, Ottawa, also compiles data on average hourly wage rates for various occupations in Ontario industries. The following table indicates the very substantial gains recorded since 1939 by workers in rubber industry, steel mills, and electrical machinery. Hamilton is an industrial city and has factories of these types located there. The percentage change from 1939 to October 1946 ranged from 54.7% to 113.7% according to the figures below, with the average of all increases amounting to 74.7%.

Another indicator of the improved purchasing power of consumers is contained in the figures of the net national income of Canada, which rose from $4,221,000,000 to $9,627,000,000 in 1945, a gain of 128.1%.

The amount of Children's Allowances paid in Ontario during the twelve months ending June 30, 1946 totalled $66,411,180. This has added greatly to the consumers' ability to pay a reasonable retail price for fluid milk. Total sales of milk in Ontario during the twelve month period ending August 1946, was 468,000,000 quarts. A three-cent per quart increase in the price for milk amounts to $14,040,000, which is less than 25% of the amount currently being received from Children's Allowances.

Still further indications of the greater spending capacity of the general public are very clearly brought out by the figures in the table below showing expenditures on luxury and amusement items. Beer sales in Ontario increased by 142% between the fiscal year 1938-39 and the fiscal year 1944-45. Amounts wagered at race-tracks in Ontario rose 101% between 1939 and 1945, with a further increase anticipated for 1946. Theatre admissions in Ontario for the same comparison increased 53.8% and the production of cigarettes in Canada has more than doubled since 1939.

AVERAGE HOURLY WAGE RATES FOR SELECTED OCCUPATIONS IN CERTAIN ONTARIO INDUSTRIES

Years 1939, 1945, and 1946

(Male Workers Only)

Occupations	1939 $	1945 $	October 1946 $	% Change October 1946 from 1939
Rubber Products				
Cutters	.484	.809	.939	+ 94.0%
Millmen	.554	.775	.905	+ 63.4%
Curers	.614	.891	1.021	+ 66.3%
Shoe Makers	.484	.707	.837	+ 72.9%
Tire Builders	.714	.997	1.127	+ 57.8%
Crude Rolled and Forged Products				
Electricians	.656	.886	1.016	+ 54.9%
Labourers	.434	.641	.771	+ 77.6%
Machinists	.595	.869	.999	+ 67.9%
Millwrights	.620	.829	.959	+ 54.7%
Welders	.604	.845	.975	+ 61.4%
Electrical Machinery, Etc.				
Sheet Metal Workers	.408	.742	.872	+ 113.7%
Coil Winders	.523	.814	.944	+ 79.8%
Platers	.458	.734	.864	+ 88.6%
Inspectors	.504	.816	.946	+ 87.7%
Labourers	.419	.623	.753	+ 79.7%
Average of above percentage increases				+ 74.7%

Figures for 1946 obtained by adding 13 cents per hour to 1945 figures to allow for recent increases.

Figures for 1939 and 1945 supplied by Research and Statistics Branch, Dominion Department of Labour, Ottawa.

INDEX OF EMPLOYMENT

1926 = 100

		Canada	Ontario	Hamilton
	1939	113.9	114.3	103.7
	1940	124.2	129.2	124.4
	1941	152.3	160.0	159.5
	1942	173.7	179.4	186.6
	1943	184.1	185.8	186.7
	1944	183.0	184.7	180.8
	1945	175.1	178.4	176.4
January	1946	168.2	172.2	169.1
February	1946	167.2	173.9	170.2
March	1946	167.0	173.6	168.9
April	1946	168.9	175.5	172.3
May	1946	169.3	176.7	172.8
June	1946	169.9	178.4	173.0
July	1946	173.6	179.6	175.9

Business Statistics Branch, Dominion Bureau of Statistics, Ottawa.

SALARIES, WAGES, AND SUPPLEMENTARY LABOUR INCOME

	CANADA		ONTARIO		
	Total (Millions of Dollars)	Per Capita $ c	Total (Millions of Dollars)	Population (000's)	Per Capita $ c
1938	2,449	219.60	1,036	3,672	282.14
1939	2,540	225.44	1,073	3,708	289.37
1940	2,860	251.30	1,227	3,747	327.46
1941	3,529	306.68	1,526	3,788	402.85
1942	4,233	363.22	1,807	3,884	465.24
1943	4,790	405.52	2,017	3,917	514.93
1944	4,969	414.95		3,965	
1945	5,037 (a)	415.63		4,004	

(a) Preliminary

	CANADA		
	Net National Income at Factor Cost (Millions of Dollars)	Population (000's)	National Income per Capita $ c
1938	3,940	11,152	353.60
1939	4,221	11,267	374.63
1940	5,112	11,381	449.17
1941	6,514	11,507	566.09
1942	8,277	11,654	710.23
1943	9,069	11,812	767.78
1944	9,685	11,975	808.77
1945	9,627 (a)	12,119	794.37

(a) Preliminary

Business Statistics Branch, Dominion Bureau of Statistics, Ottawa, Canada.

CHILDREN'S ALLOWANCES

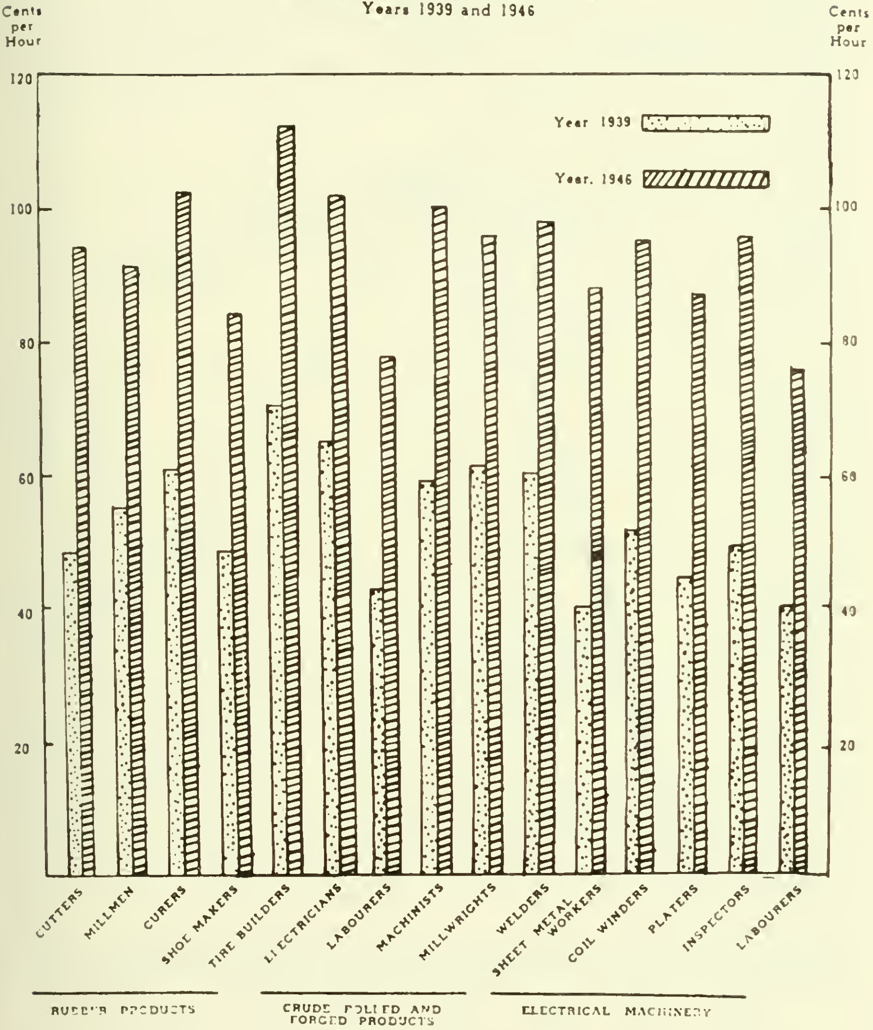
(a) Total amount paid in Ontario from July 1, 1945 to June 30, 1946	$66,411,180
(b) No. of children registered as at June 30, 1946	941,533
(c) Average payment per child for June 1946	$6.02

LUXURIES AND AMUSEMENTS

Beer Sales in Ontario	Fiscal Year 1938-39—	$26,200,053
	Fiscal Year 1944-45—	$63,502,830
	% Increase	142.4%
All Alcoholic Beverages Sales in Ontario	Fiscal Year 1938-39—	$49,637,986
	Fiscal Year 1944-45—	$102,885,847
	% Increase	107.3%
Amount Wagered at Race-tracks in Ontario	Year 1939—	$12,858,640
	Year 1945—	$25,907,764
	% Increase	101.5%
Theatre Receipts in Ontario	Year 1939—	$15,247,941
	Year 1945—	$23,740,871
	% Increase	55.7%
No. of Paid Theatre Admissions in Ontario	Year 1939—	59,686,373
	Year 1945—	91,817,463
	% Increase	53.8%
Production of Cigarettes in Canada	Year 1939—	7,163,433,000
	Year 1944—	15,484,605,000
	% Increase	116.2%

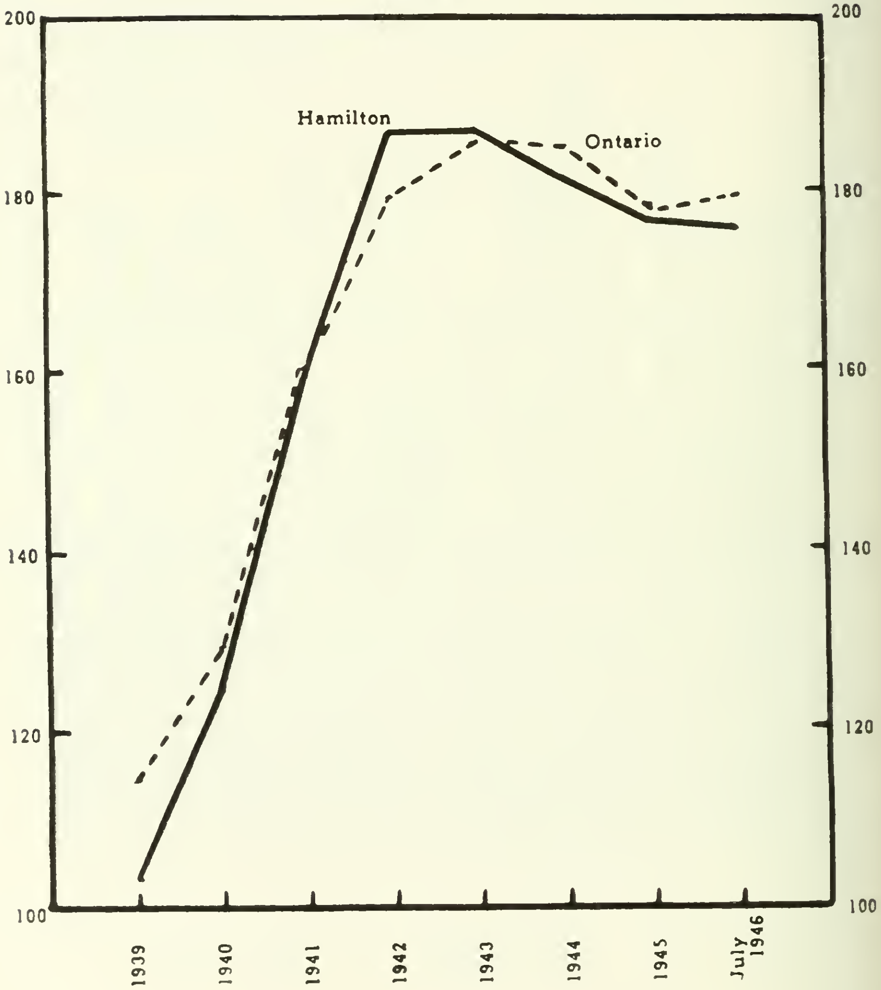
Dominion Bureau of Statistics, Ottawa

Average Hourly Wage Rates in Ontario
Years 1939 and 1946

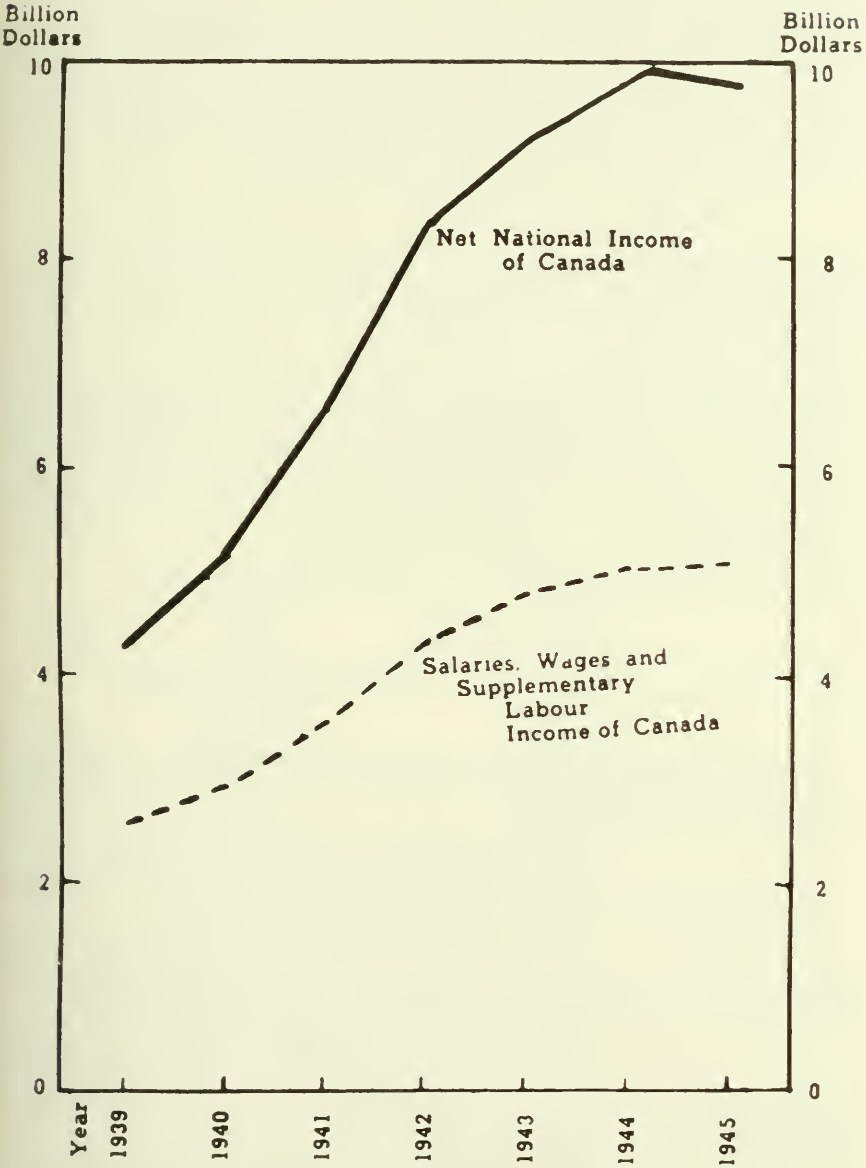


Index of Employment

1926—100



National Income and Wages of Canada



APPENDIX 13

LIST OF FORMULAE USED IN CALCULATING COST OF PRODUCING 100 POUNDS OF MILK

1. *The Misner Formula*

Professor E. G. Misner of Cornell University states that, as a result of a large number of studies made by Agricultural Experiment Stations in different parts of the United States, the cost of producing 100 pounds of 3.5 test milk appears to be about 30 pounds of grain and other concentrates, 100 pounds of silage and other succulent feed, 60 pounds of hay and other dry forage, and 2.5 hours of labour. The cost of these quantities of feed and labour represents about 80 per cent of the total cost of production after credits for manure and calves are deducted.

The Misner formula, therefore, reads as follows:

30 pounds of grain @ .... per ton =
100 pounds of silage @ .... per ton =
60 pounds of hay @ .... per ton =
2.5 hours of labour @ .... c per hr. =

The total feed and labour cost thus calculated = 80 per cent of the total cost of producing 100 pounds of 3.5% milk.

2. *The Hare Formula*

In connection with the milk cost study carried on in Ontario during the four years from 1936-37 to 1939-40 inclusive, Mr. H. R. Hare found that the quantities of the various items entering into the cost of producing milk tended to be fairly constant from year to year. This fact suggested that a formula based upon quantitative data associated with current values might serve as a means of determining changes in production costs as between periods. To this end the following quantitative data was presented as being applicable to the Toronto Whole Milk Zone.

Calculated basic quantities of Feed and Labour required to produce 100 pounds of *milk for sale* in the Toronto Whole Milk Zone:

Oats	21 lbs.
Barley	8 lbs.
Linseed Oil Meal	7 lbs.
Mixed Hay	80 lbs.
Silage	160 lbs.
Labour	3 hours.
Hauling	29.9 cents

By using the quantitative data presented above the cost of producing 100 pounds of market milk may be determined by applying values to the several items as follows:

Oats	The farm price of oats as presented in the Ontario Monthly Crop Report, Toronto.
Barley	Same as for oats.
Linseed Oil Meal	The wholesale price of Linseed Oil Meal as quoted Montreal wholesale F.O.F. ton lots.
Mixed Hay	The average values of the two classes of hay (1) hay and clover and (2) alfalfa as quoted in the Ontario Monthly Crop Report.
Silage	The value of silage may range from $3 to $5 per ton depending upon the average yield as shown by the Ontario Monthly Crop Report, Toronto. For an 8 ton yield the value should be set at $5 whereas it should be set at $3 for a yield of 11 tons. For each additional ton per acre above 8 tons the value per ton should be reduced by 66 cents.
Labour	The value of labour should be set at 16.5 cents per hour weighted by current farm wage rates as follows: $\frac{16.5 \text{ X (average wage of males per month, incl. board)}}{36}$ The wages of male help to be used is that determined by the Bureau of Statistics, Ottawa.

To the sum of the costs thus calculated, add 29.9 cents to cover delivery charges from the farm to the distributing plants in Toronto. The total arrived at represents approximately 75 per cent of the gross cost of producing whole milk. Other costs to be considered include pasture, use of dairy buildings and equipment, interest on dairy livestock at 4 per cent, depreciation of dairy livestock, a proportion of the farm expenses for taxes, insurance, telephone and electricity chargeable to the dairy enterprise, and general dairy expenses incurred for dairy equipment repairs, fly spray, pedigree registration of cattle, disinfectants and other incidentals. These items represent 25 per cent of the gross cost of producing milk.

Appreciation of dairy livestock and the value of milk used by other livestock represent a credit approximating 13 per cent of the gross cost. There remains 12 per cent of the cost (25 - 13 = 12) to be added to the cost thus far determined. To the sum of the items already calculated, add 12 per cent. The total will represent the cost of production for the period represented by the prices used in the calculation.

3. *Cunningham Formula*

*Estimated cost of Producing Milk by Formula**—The cost of producing milk may be calculated by formula by applying current prices to the physical quantities of feed and labour required to produce a given amount of milk. In table 7 you are shown the approximate amounts of grain, hay, silage, pasture and labour required in the production of 100 pounds of milk, based on cost-of-production studies in the period 1930 to 1936. These items made up 90 per cent of the net cost of milk. Feed prices and wage rates for any particular period may be used to calculate the values of these items. The total of the values divided by 90 and multiplied by 100 gives the calculated net cost of producing 100 pounds of milk.

Table 7—ESTIMATED COST OF MILK BY FORMULA

Items	Formula		
	Approximate amounts required to produce 100 pounds of milk.	Prices	Cost to Produce 100 pounds of milk.
Grain............	33 pounds x	.........per pound =	....
Hay	70 pounds x	.........per pound =	....
Silage	100 pounds x	.........per pound =	....
Pasture..........	2.3 days x	.........per day =	....
Labour	2.6 hours x	.........per hour =	....
Total for feed and labour (90 per cent of net cost)			....
Yearly average cost (100 per cent)			....

Formulas as summarized by Morrison

Various simple formulas have been worked out for estimating the cost of milk production. In these formulas all the costs are reduced to terms of feed and labour. Therefore, by taking the current prices for feeds and labour, a more or less approximate estimate of the cost of producing milk can readily be made at any time.

In using these items as a basis for calculating the cost of producing milk, it is assumed that as the prices of feeds and labour rise or fall the other items of expense and the credit items will fluctuate more or less in the same proportion. Though the costs of all the factors probably never change in exact unison, they usually keep closely enough together for purposes of comparison.

One of the formulas which has been used most widely is that of Warren of the New York (Cornell) Station. According to this formula, the cost of producing 100 pounds of milk under New York conditions is found by first totalling the cost of 33.8 lbs. concentrates, 43.3 lbs. hay, 10.8 lbs. of other dry roughage (corn stover, corn fodder, straw, etc.), 100.5 lbs. silage, and 3.02 hours of man labour. This total represents 80 per cent of the entire cost. Therefore it must be increased by one-fourth to determine the approximate total cost of 100 lbs. of milk, according to the formula. The Warren formula has been simplified by Misner, as shown in the following table. This presents some of the formulas that have been proposed to meet conditions in various districts.

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*From "Costs in Dairy Farming" by L. C. Cunningham, Cornell Extension Bulletin No. 427.

COMPARISON OF FORMULAS FOR COST OF MILK PRODUCTION

Factors in Formula	Warren (N.Y.)	Misner (N.Y.)	Pearson (Ill.)	Food Administration	Indiana	Michigan
Concentrates........lbs.	33.80	30	44	33.50	28.9	23.50
Hay................lbs.	43.30	60	50	45.30	38.1	34.90
Other dry roughage..lbs.	10.80		39	11.50	9.9	15.20
Silage..............lbs.	100.50	100	188	102.60	104.8	110.40
Labour...........hours	3.02	2.5	2.42	2.88	2.4	2.11
Corrective factor......%	25	25	0	23.7		45.8

To illustrate the method of estimating the cost of milk production according to a formula, let us estimate the cost, using the Misner formula. We will assume that the cost of a good concentrate mixture is $26 a ton; of hay $12 a ton; of silage, $4 a ton; and of farm labour 25c an hour, including board. At these prices the total cost of 30 lbs. concentrates, 60 lbs. hay, 100 lbs. silage, and 2.5 hours man labour will be $1.575. Increasing this total by 25 per cent to cover the other costs will give us $1.97 as the estimated total cost of producing 100 lbs. of milk.**

**The above table and accompanying explanation is found in "Feeds and Feeding" by F. B. Morrison, Twentieth Edition, The Morrison Publishing Company, Ithaca, New York, 1944, pages 579 and 580.

APPENDIX 14

DAIRY COST SURVEY

Name of Operator.................................County....................

P.O. Address...............................Type of milk shipper.............

Acres Operated.............Owned or Rented...........Breed of Cattle Kept...

Estimated proportion of total farm income from dairying................%

Beef cattle..........% Hogs..........% Poultry..........% Cash Crops......%

Other..........%

Enumerator.....................................

Section 1—Dairy Herd Inventory, 1946

	Jan. 1, 1946		Purchased 1946		Sold 1946		Died 1946		Dec. 31, 1946	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Herd bull, pure bred...										
Herd bull, grade.......										
Cows, pure bred.......										
Cows, grade...........										
Heifers, over 1 yr. p.b...										
Heifers, over 1 yr. grade										
Heifer calves, p.b.......										
Heifer calves, grade....										
Calves, veal*..........										
Calves, bull...........										

*Includes calves sold at birth.

Section 2—Inventory of Dairy Buildings and Equipment

	Total Value	Amount Chargeable to Dairy Business		Total Value	Amount Chargeable to Dairy Busiuess
Dairy Barn & Silo			Milking Machine......		
Milk House......			Milk Cooler..........		
Litter carrier.....			Cans, pails, strainer, etc.		
Feed carrier or cart			Cream separator......		
Power & Pumping Equipment.....			Milk scales...........		
Feed grinder.....			Milk hauling equipm't.		
Root pulper......			Misc. stable tools & equipment..........		
Oat roller........			Other (specify)........		
Total........			Total............		
			GRAND TOTAL...		

Section 3—Home Grown Feed Summary

	On Hand Jan. 1, 1946	1946 Crop	On Hand Dec. 31, 46	Fed to Dairy Herd, 1946	
				Amt.	Value
Oats					
Barley					
Wheat					
Mixed Grain					
Corn (Grain)					
Corn Silage					
Corn fodder					
Soybeans					
Roots					
Hay (state kind)					
Straw (feed or bedding)					
Other					

Note—First three columns in Section 3 need not be filled in if amount of home-grown feed fed to dairy herd can be determined more accurately, such as on the basis of daily consumption or otherwise.

Section 4—Purchased Feed fed to Dairy Herd, 1946

	Amt.	Value		Amt.	Value
Oats.............			Soybean meal...........		
Barley............			Dairy Concentrate (state kind & protein content)		
Wheat............			Calf meal...............		
Mixed Grain.......			Beet pulp..............		
Corn..............			Silage.................		
Bran..............			Roots..................		
Shorts............			Hay (state kind)........		
Middlings.........					
Glutin feed........					
Brewer's grains.....			Straw..................		
Distiller's grains....			Mineral................		
Linseed oil meal....			Salt...................		
Cottonseed meal...			Other..................		
Total.........			Total..................		
			GRAND TOTAL.....		

Section 5—Summary of Dairy Pasture, 1946

Acres	Type of Pasture*	Period Used	Value

*Indicate whether short or long term pasture, type of mixture used, etc. If rented, specify.

Section 6—Farm Labour Summary

Hired Labour	Months Hired	Cash Wage per mo.	Value of Board or Perquisites	Total Cost of labour

Family Labour	Months Worked	Rate Paid	Total Value
Operator............			
Sons................			
Women............			
Other...............			

Section 7—Summary of Dairy Herd Labour

Month	Days	Ave. time per day hrs.	Total Dairy Labour for Month hrs.	Rate per hour	Monthly Labour Cost
January...	31				
February..	28				
March....	31				
April......	30				
May......	31				
June......	30				
July......	31				
August....	31				
September	30				
October...	31				
November	30				
December.	31				
Total, Year					

Note:—First column only in Section 7 need be completed in field.

Section 8—Farm Perquisites Used in House

	Amount	Price	Milk Equiv.	Value
Whole Milk...........				
Cream...............				
Skim Milk............				
Dairy Butter.........				
Home-made Cheese....				

Note:—Only columns for amount and price need be completed in field. Price should be a *farm price*, not city retail price.

Section 9—Sales of Dairy Products

	J.	F.	M.	A.	M.	J.	J.	A.	S.	O.	N.	D.	Total
Fluid milk lb.													
Total Value....													
Cheese milk lb..													
Total Value....													
Manufactured milk lb........													
Total Value....													
Cream lb.......													
Total Value....													

Note:—If possible, total value of Diary Product Sales should be the value before any deductions for hauling, association fees, etc. These will then be shown as expenses n Section 11.

Section 10—Credits to Dairy Live Stock

	Amount	Value at farm
Whole milk fed to farm livestock & poultry.		
Skim milk fed to farm livestock & poultry..		
Buttermilk fed to farm livestock & poultry..		
Whey fed to farm livestock & poultry......		
Manure..............................		
Prizes, etc...........................		
Other................................		

Section 11—Current Dairy Expenses, 1946

	Total Year	Dairy Share**
Repairs, dairy buildings		
Repairs, dairy equipment		
Insurance		
Taxes		
Veterinary & medicine		
Hauling and trucking*		
Feed grinding		
Electric light & telephone		
Ice		
Registration Fees		
Breeding fees		
Association fees		
Milk testing expense		
Spray material, whitewash, disinfectants, etc		
Milk strainer discs		
Advertising, stationery		
Grease and Oil		
Misc. hardware & supplies		
Other (specify)		

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*Include milk or cream hauling unless deducted from value of sales in Sect. 9.

**Expenses such as taxes, insurance, electricity, etc. which are jointly chargeable to dairy and some other enterprise should be apportioned on as reasonable a basis as possible. One method might be on the basis of income contributed by each enterprise

APPENDIX 15

SUPPLEMENTARY BRIEF ONTARIO WHOLE MILK PRODUCERS' LEAGUE

The following minutes were duly moved and seconded at the annual Meeting of the Ontario Whole Milk Producers' League, 19th and 20th February, 1947:

WHEREAS the Provincial cabinet has seen fit to announce that the Milk Control Board has no power to issue orders establishing fair prices to producers and to consumers, and;

WHEREAS the Ontario Milk Producers have every confidence in the Hon. T. L. Kennedy, who was responsible for the Milk Control Act in 1934, and as it has so effectively regulated the fluid milk industry for the past twelve years.

THEREFORE BE IT RESOLVED that we, the Board of Directors of the Ontario Whole Milk Producers' League, representing approximately 16,000 dairy farmers, urge the Premier of Ontario to not only have the Milk Control Board of Ontario sustained, but to amend the Act, if necessary, giving the Board the power to issue orders dealing with production, transportation, distribution, and the setting of fair prices, in the interest of the fluid milk industry.

RESOLVED THAT the Ontario Whole Milk Producers' League do everything in their power, within their power, to support the Concentrated Milk Producers, Cheese Producers and Cream Producers in their campaign to get cost of production and anything else in the interest of the dairy industry.

WHEREAS it is a recognized fact that quite a large percentage of the cost in producing milk for the fluid milk market is involved in keeping up a level supply and in many cases catering to fluctuating markets:

AND WHEREAS we have been able through our organization to establish the principle of cost of production as a fair price of milk for our producers;

THEREFORE BE IT RESOLVED that we recommend to all our local markets and members to study the need of these markets in the light of past experience and endeavour to regulate their supply by setting a proper quota system to meet, as near as possible, the needs of the consumer.

We further recommend that quota committees show no mercy when setting or adjusting quotas to the producer who persistently ignores his obligations to his market and his fellow producer.

We believe that if we hope to maintain a level price throughout the year it will be necessary for all producers to keep seasonal surpluses off the market and make every effort to keep up their production when milk is normally in short supply.

BE IT RESOLVED THAT the Lincoln County Milk Producers' Association assembled in Annual Meeting wish to express our appreciation of the untiring efforts of the Honourable T. L. Kennedy, Minister of Agriculture, on our behalf.

We also wish to point out the desirability for the early reinstatement of the Ontario Milk Control Board with full authority to control the sales and fix prices of milk from producer to consumer and to fix a reasonable and satisfactory rate for the distributor for services rendered in distributing our products and furthermore, to control and direct the trucking of milk and charges for this service in order that we may have orderly marketing in the fullest extent.

BE IT RESOLVED THAT the Lincoln County Milk Producers in Annual Meeting assembled do extend their unqualified support to the Ontario

Milk Producers' League in their efforts to negotiate an agreement of sale of our milk at a fair and equitable price which assures the producer cost of production.

WHEREAS under the Public Commercial Vehicles Act it is virtually impossible for producers to transport their milk from their farms to the dairies cooperatively.

THEREFORE BE IT RESOLVED that we ask the Ontario Provincial Government to amend the Public Commercial Vehicles Act making it possible where any group of producers decide that it is in their best interest to transport their milk cooperatively without obtaining a P.C.V. license.

WHEREAS the cost of transporting milk from the farm to the market is a factor that must be taken into consideration in milk costs to the producer;

AND WHEREAS the volume of milk carried and the mileage travelled has an important bearing on the cost of transportation;

AND WHEREAS the milk is the property of the producer until it arrives at the designated market and accepted by the distributor;

THEREFORE BE IT RESOLVED that the Ontario Whole Milk Producers' League request the Royal Commission now inquiring into the cost of producing, processing, distributing, transporting and marketing of milk, taking into consideration the savings that could be effected by local producer associations transporting all the milk from the farm to the plant of the distributor, the number of trucks that could be eliminated, the saving of miles travelled and the overlapping of trucks, to recommend amending the Milk Control Act, vesting the Milk Control Board with authority to license all truckers of milk from the farm of the producer to the distributing plant, and with authority to arbitrate and fix charges for this service.

THAT we, the Milk Section of the Dairy Farmers of Canada, affirm the principle of cost of production as one of the main factors in determining the price of dairy products on any market and give all assistance possible to achieve this.

THAT we commend the Milk Foundation for the excellent work they have already done and that we urge the expansion of their program because we feel that they are making a real contribution to the dairy industry and are in a position to contribute greatly, by their interest, to our national health.

Note:—The last two resolutions were passed by the Dairy Farmers of Canada and are presented here for the approval of the League.

APPENDIX 16

ORDER NUMBER 39-15
TORONTO MILK TRANSPORT

Effective June 1, 1939.

ORDER NUMBER 39-15

Respecting the Transportation of Milk from the Farms of Producers to the Plants of Distributors Located in the Toronto and District Market.

WHEREAS it is provided in the Milk Control Act that it shall be the duty of the Board and it shall have power to inquire into any matter relating to the transportation of milk and to adjust and settle disputes arising between producers, distributors and transporters of milk and in each case to make such order as it deems just, having regard to the circumstances, and

WHEREAS the regulations made pursuant to the Milk Control Act provide for the recognition of a Milk Transport Committee, and

WHEREAS a special committee "The Toronto Joint Committee on Milk Transportation," have made certain recommendations to the Board respecting the rates for transporting milk from the farms of producers to the plants of distributors located in the Toronto and District Market and for the settling of disputes respecting such transporting of milk and have requested the Board to approve the recommendations and to make an order declaring the recommendation in force, and

WHEREAS the Board having considered the recommendation and having made due enquiries have agreed to make an order to—

(a) Recognize the Toronto Joint Committee on Milk Transportation,
(b) Define the duties and responsibilities of the said Toronto Joint Committee on Milk Transportation, and
(c) Establish a maximum rate that may be charged for transporting of milk from the farms of producers to the plants of distributors located in the Toronto and District market.

IT IS HEREBY ORDERED THAT—

1. For the purpose of this order the "Toronto and District Market" shall mean the Toronto and district area included in Section 1 of the agreement made between the Toronto Milk Producers and the Toronto Milk Distributors, dated the 5th day of February, 1937, which agreement was approved and ordered in effect by the Board on the 6th day of February, 1937, being Board Order number 37-5.

2. It is ordered that a Committee which shall be known as the "Toronto Joint Committee on Milk Transportation" is hereby established and recognized by the Board in accordance with the further provisions of this order.

3. The Toronto Joint Committee on Milk Transportation shall consist of fifteen members which shall be annually appointed in the following manner:

(a) The Toronto Milk Producers' Association shall annually appoint five members to the Toronto Joint Committee on Milk Transportation.
(b) The Toronto Milk Distributors' Association shall annually appoint five members to the Toronto Joint Committee on Milk Transportation, and
(c) The Toronto Milk Transport Association shall annually appoint five members to the Toronto Joint Committee on Milk Transportation,

provided that in the event of a vacancy on the said Committee, the Association that appointed the member that has caused the vacancy shall forthwith appoint a member to fill such vacancy.

It shall be the duty and responsibility of the Toronto Joint Committee on Milk Transportation to supervise the transportation of milk from the farms of producers to the plants of distributors located in the Toronto and District market and to forward recommendations to the Board provided that in the event the Department of Highways have jurisdiction, the recommendations shall be made to the said Department of Highways.

In the case of a dispute between a milk transporter and any of the other milk transporters such dispute shall be referred to the Toronto Milk Transport Association and if no satisfactory settlement of the dispute is made it shall be referred to the Toronto Joint Committee on Milk Transportation and if such Committee makes no satisfactory settlement of the dispute it shall be referred to the Milk Control Board of Ontario for final settlement.

In the event a revision of the rates for transporting milk is requested by either the producers or the transporters, or any of them, and no satisfactory settlement is agreed upon by such producers and transporters the matter shall be referred to the Toronto Joint Committee on Milk Transportation, and, in the event such Committee makes no satisfactory settlement of the matter, it shall be referred to the Milk Control Board of Ontario for final settlement.

No producer or transporter shall ship or transport milk to a distributor in a can that belongs to any other distributor and no distributor shall receive milk at the plant of such distributor in a can that belongs to any other distributor provided that in the event a distributor delivers a milk can to a transporter that belongs to any other distributor such transporter shall report the same to the owner of the milk can.

Every milk transporter operating under a P.C.V. license issued by the Department of Highways shall, when transporting milk, act in the capacity of "common carrier" only and shall not purchase milk from any producer for resale to any distributor.

The maximum rate that may be charged by a transporter for transporting milk from the farm of a producer to the plant of a distributor located in the Toronto and District market shall be as follows:

For 15 miles and less —15 cents per eight gallon milk can
For 20 miles and over 15 miles—20 cents per eight gallon milk can
For 30 miles and over 20 miles—23 cents per eight gallon milk can
For 45 miles and over 30 miles—25 cents per eigth gallon milk can
For 65 miles and over 45 miles—28 cents per eight gallon milk can
For 90 miles and over 65 miles—30 cents per eight gallon milk can
For over 90 miles—at such price as the producer and transporter may agree upon.

(a) These maximum rates shall apply for the same service rendered by the milk transporters, or any of them, previous to the effective date of this order.

(b) In any case where rates in effect previous to the effective date of this order are lower than the maximum rates provided above, the previous rates shall remain in effect unless justifiable reason for an adjustment can be shown.

(c) The mileages mentioned in this section shall be the shortest improved road mileage from the producer's farm to the corner of King and Yonge Streets, Toronto, as defined in the road chart filed with the Milk Control Board by the special Committee of the Toronto Joint Committee on Milk Transportation.

The provisions of this order shall apply to the transportation of milk from the farms of producers to the plants of distributors located in the Toronto and District Market.

The provisions of this order shall have effect from the first day of June, 1939.

This order is made, signed and sealed, this ninth day of May, Nineteen Hundred and Thirty-nine.

(sgd.) C. M. Meek, Chairman.
(sgd.) J. B. Nelson, Secretary.

Certified a true copy of Order number 39-15 of the Milk Control Board of Ontario.

(sgd.) J. B. Nelson.

ORDER NUMBER 39-16
TORONTO MILK TRANSPORT

Effective June 16, 1939.
Amending Order No. 39-15

ORDER NUMBER 39-16

Respecting the Transportation of Milk in the Toronto and District Market.

WHEREAS it is necessary to correct a typographical error made in clause nine of Order number 39-15,

IT IS HEREBY ORDERED that the said clause nine of Order number 39-15 be amended to read:

For 15 miles and less —18 cents per eight gallon milk can
For 20 miles and over 15 miles—20 cents per eight gallon milk can
For 30 miles and over 20 miles—23 cents per eight gallon milk can
For 45 miles and over 30 miles—25 cents per eigth gallon milk can
For 65 miles and over 45 miles—28 cents per eight gallon milk can
For 90 miles and over 65 miles—30 cents per eigth gallon milk can
For over 90 miles—at such price as the producer and transporter may agree upon.

This Order is made, signed and sealed, this Sixteenth day of June, Nineteen hundred and Thirty-nine.

(sgd.) C. M. Meek, Chairman.
(sgd.) J. B. Nelson, Secretary.

Certified a true copy of Order Number 39-16 of the Milk Control Board of Ontario.

(sgd.) J. B. Nelson.

APPENDIX 17

The Honourable Justice Dalton Wells,
Commissioner,
Royal Commission on Milk.

ACCOUNTANT'S REPORT
MILK TRANSPORTATION

Sir:

We have reviewed a number of financial statements of concerns engaged in the transportation of milk and have studied the brief prepared by the Toronto Milk Transport Association dated January 20, 1947, in which is included the combined operating results of twenty transportation businesses operating in Toronto, Galt, Newmarket and other centres and which serve the Toronto milk shed.

The statements received by us were in each case prepared by public accountants and relate to the year 1945. That of the Toronto Milk Transport Association covers the operations of 68 vehicles of various types and capacities and is considered to provide a fair indication of the operations of the industry as a whole and in particular a representative cross section of that portion serving the Toronto area.

Operating results for 1945 for a representative group of twenty operators

The submissions indicate that the combined earnings of the group before provision for profits taxes, were $21.526 or 5.90% of haulage revenue for 1945 as compared with $35,103 or 14.24% for 1939. This indicates a contraction in dollar profits of 31% although the haulage revenue in 1945 was $365,004 and in 1939 $246,655.

While revenues have advanced due to increased volume of milk loads and a slight increase in the average haulage rate, operating costs have also increased and below we give a tabulation showing the actual costs of the chief elements for 1945 as compared with what they would have been had the relationship to sales in 1939 remained unchanged. The summary provides an accounting of the change in revenues and earnings.

	1945 Actual cost	% of sales	1945 Theoretical cost on basis of 1939	% of sales	Excess of actual over theoretical
Sales revenue.....	$365,004	100.00	$365,004	100.00	......
Cost of:					
Wages...........	102,622	28.12	85,374	23.39	$17,248
Gas, oil and grease	84,425	23.13	73.110	20.03	11,315
Repairs and tires..	76,104	20.85	41,282	11.31	34,822
Depreciation.....	16,567	4.54	29,857	8.18	*(13,290)*
	$279,718	76.64	$229,623	62.91	$50,095
Administrative and office salaries and general expenses.	63,760	17.46	83,404	22.85	*(19,644)*
Total cost........	$343,478	94.10	$313,027	85.76	$30,451
Net profit (before taxes).........	$21,526	5.90	$51,977	14.24	*($30,451)*

It will be noted that 1945 costs have benefited considerably from reduced depreciation provision indicating that a number of the vehicles in service in 1945 were fully depreciated also that a number were experiencing their first years service in 1939 whereby the income tax regulations would permit a 25% depreciation charge against profits for that year as compared with 20% in subsequent years.

Offsetting the saving in depreciation provision is the greatly increased cost of repairs to vehicles also tire repairs and replacements. These averaged $509 per annum for each vehicle in 1939 as against $1,119 in 1945 indicating that the vehicles were requiring more frequent servicing and had become more costly to operate.

The apparent saving in administrative and office salaries and general expenses is chiefly brought about by the payrolls of both administrative and office salaries being held at almost the same level in 1945 as in 1939. In the last mentioned year they totalled $23,188 representing 9.41% of revenue while in 1945 the total was $24,207 equal to 6.63%. The cost strikes us as being adequate, nevertheless the expenditure has been satisfactorily controlled.

Under emergency wartime controls many restrictions were applied to the automotive transport industry such as mileage and territorial limitations, elimination of certain discounts from garages for repair parts, changes in the terms of guarantee relating to tire purchases. Operating costs were also advanced appreciably by increased costs of gasoline and oil and the reduced mileage from tires manufactured under wartime standards and specifications. To compensate for these adverse factors rate increases were authorized where essentiality of service and financial necessity could be proven, and this combined with the substantial increase in fluid milk consumption, was of considerable assistance to the milk transport industry in overcoming what may have otherwise been a critical period.

Financial position

The balance sheet position of the industry is not particularly strong, there being many small transport businesses operating with limited financial resources and on borrowed funds. The interest on such monies has been allowed as a charge against profits in the results herein reported.

Under such conditions it is conceivable that difficulties may be encountered by some concerns in the acquisition of new vehicles to replace the old which would no doubt result in savings in repair and operating costs.

Operating data

While it appears that for 1945 earnings (before taxes) average 5.90% of revenues for the milk transportation industry individual results vary considerably. The statements in our possession show profits ranging from 3% to 13% of revenues for some businesses, others either breaking even or showing a loss.

Dollar revenues per vehicle also reveal sharp contrasts ranging from $4,000 per annum to over $7,000 for an average of $5,400 per year.

The average original cost per vehicle appears to approximate $2,000 but at the close of 1945 some concerns had depreciated the vehicles down to an average book value of less than $300.

Taking the group of twenty concerns as a whole it was found that in 1939 the average number of eight gallon cans transported by each vehicle was 18,804 as compared with 22,205 for 1945, an increase of 18%. In 1939 the haulage revenue per can was 23.85 cents whereas in 1945 the average was 24.17 cents, showing an increase of only .32 of one cent per can, according to the brief of the Toronto Milk Transport Association.

Observations and conclusions

Approximately 30% of the total fluid milk consumption of the Province is accounted for in the Toronto milk shed. This represents approximately 129 million quarts or 332,820,000 lbs. of whole milk per annum.

In terms of eight gallon cans the foregoing approximates 4 million units so that taking an average haulage rate of 24.17 cents per can as shown for 1945, a total annual haulage cost for the Toronto milk shed of $966,800 is arrived at equal to .76 of one cent per quart.

As the average load per vehicle is 22,205 cans per annum it appears that over 200 vehicles may be serving the Toronto market alone.

The financial statements we have examined show a return of 5.90% of revenue for 1945. It is estimated that the capital employed for these concerns as calculated substantially in accordance with the provisions of the Dominion excess profit tax act may approximate $90,000. It should be pointed out, however, that capital employed is not an important factor in this business. The earnings return in relation thereto is approximately 24%.

Based on the foregoing it could well be that more than 600 vehicles are engaged in milk transportation throughout the Province and that the capital employed may approach $800,000. On the basis of revenues approximating $3,000,000 for 1946 the return on capital employed for the whole industry may exceed 20%.

The control of this very appreciable cost factor in the price of milk is in the hands of the Toronto Joint Committee on Milk Transportation, a body formed by the Milk Control Board in 1939, comprising fifteen members, five from each of the Producers' and Distributors' Associations, and five from the Toronto Milk Transport Association.

We presume that this body is furnished with adequate statistical data at regular intervals to ensure satisfactory control over rates and services, as such cost currently represents about 4½% of the consumer price per quart of fluid milk.

There is some overlapping of territories which might be eliminated by closer co-ordination amongst individual operators as well as between the producers and distributors.

The industry may have annual revenues in excess of $3,000,000 and if a determined effort is initiated by the Toronto Joint Committee there seems a reasonable prospect that some economies helpful to the industry may be effected and improved standards of service to producers and distributors attained with resultant benefit to the consuming public.

Respectfully submitted,

JOHN S. ENTWISTLE,

Accountant, Royal Commission on Milk,

Province of Ontario.

July 26th, 1947.

APPENDIX 18

ROYAL COMMISSION ON MILK

INDEX TO ACCOUNTANTS' REPORT
SURVEY OF FLUID MILK DISTRIBUTORS LOCATED IN THE PROVINCE OF ONTARIO

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ROYAL COMMISSION ON MILK

INDEX TO EXHIBITS
FORMING PART OF ACCOUNTANTS' REPORT
SURVEY OF FLUID MILK DISTRIBUTORS
LOCATED IN THE PROVINCE OF ONTARIO

EXHIBIT

A. Index of counties comprised in each of the eight zones, or milk sheds, showing the number and type of independent fluid milk distributive businesses located in each, and the number and type from whom financial statements and other data was received and included in our survey.

B. Recapitulation by zones of data extracted from financial statements submitted by 387 independent fluid milk distributors.

C. Tabulation by zones of sales groupings of 387 independent fluid milk distributors.

D. Tabulation by zones showing the materials, processing, distributing, and administrative costs of 41 representative independent fluid milk distributors combined.

E. Tabulation by zones showing the material, labour and facilities costs of 41 representative independent fluid milk distributors combined.

Note: The above exhibits do not include any figures relating to the three largest concerns as they are dealt with separately in the report.

The Honourable Justice Dalton Wells,
Commissioner,
Royal Commission on Milk.

Accountants' Report
Survey of fluid milk distributors
Located in the Province of Ontario

Sir:

We have completed our survey on the above subject and now have the pleasure to submit our report thereon.

Assignment, approach and procedure

We were required to investigate and report on the operations of fluid milk distributors located in the Province of Ontario with particular regard to costs, prices, price spreads, methods of financing, and methods of management.

These matters are dealt with in the report which follows and which includes the exhibits listed on Page 80.

Before proceeding to deal with the various points in detail, it is considered that a brief reference to certain of the more important matters relating to the industry as a whole would be of advantage.

Industry background:

According to the Milk Control Board there were 630 regular distributors, and 346 producer-distributors licensed to operate in the Province of Ontario in 1946. Of these, 416 were members of the trade organization known as the Ontario Milk Distributors' Association.

The industry within the Province comprises three large companies, whose combined dollar sales approximate one-third of the total, one hundred or more independent incorporated companies, the remainder being proprietory or partnership businesses with annual sales ranging from $5,000 per annum to over $1,000,000. There are also a few co-operative organizations.

Based on information coming to our notice, there have been a number of absorptions and amalgamations in recent years which may have tended to increase the influence of the larger concerns within the industry, while at the same time, perhaps, contributing to its overall efficiency.

The amount of capital employed is not high in relation to sales volume. Practically all of the concerns carry fixed assets on the books at original cost less depreciation, but certain absorptions and amalgamations have resulted in appraised values being employed in a few instances.

Besides processing and distributing fluid milk and cream, chocolate drink, and buttermilk, the industry produces large quantities of ice cream, butter, cheese, and concentrated milk products. It also trades in eggs and poultry.

With the exception of one company, operations are restricted to the domestic market, but not necessarily the Province of Ontario, as some dairy produce is shipped into Ontario, while some, which is processed within the provincial boundaries, is shipped to other provinces. This movement is, no doubt, governed by price and supply factors.

The overall sales volume of the fluid milk distributive industry in Ontario is estimated at $90,000,000 for 1946, of which approximately 65% relates to fluid milk and cream, 8% to butter, and 7% to ice cream; the balance comprising chocolate drink, cheese, and sundry produce. The table, which follows, shows the allocation of the estimated whole milk production for that year:

TABLE 1

Allocation of estimated whole milk production
in the Province of Ontario
for the year 1946

—	Production	1946 Estimated pounds of whole milk	% of total	1945 % of total
Creamery Butter	68,785,800 lbs.	1,610,275,000	36.92	38.47
Factory Cheese	91,978,000 lbs.	1,030,153,600	23.62	26.94
Fluid Milk	467,736,000 qts.	1,206,758,900	27.67	23.69
Fluid Cream	13,519,000 qts.	148,709,000	3.41	2.89
Condensed Whole Milk	14,765,700 lbs.	33,665,800	.77	.77
Evaporated Milk	98,063,700 lbs.	215,740,100	4.95	4.83
Powdered Whole Milk	14,535,200 lbs.	116,281,600	2.66	2.41
		4,361,584,000	100.00	100.00

Geographically, the industry is spread throughout the Province, the smaller independents in the main serving the rural districts and the larger ones, including the three big concerns, the urban and metropolitan centres.

The number of personnel directly in the employ of the industry in the Province is approximately 8,000.

Approach and procedure:

The procedure adopted in the procurement of the data necessary for the proper completion of the assignment was as follows:

On December 7th, 1946, a circular letter was addressed to 595 distributors of dairy products and a number of producer-distributors located in the Province of Ontario, requesting that they submit to the Commission a copy of their auditor's unabridged report with certified financial statements, including assets and liabilities, trading or operating, and profit and loss statements for the fiscal year next preceding October 1st, 1946. In the event that no regular audit was conducted, the concerns were requested to furnish their own statements.

In additon, the distributors were requested to submit an estimate of net profit for their current fiscal year, before provision for income and excess profit taxes.

Although the foregoing information was requested to be lodged with the Commission not later than December 17th, 1946, it was not until toward the close of January, 1947, that a sufficiently satisfactory response was recorded enabling us to proceed with an analysis of financial data and tabulations.

Of the 595 requests, only a few unimportant businesses failed to respond. We were, however, only able to include in our tabulations the submissions of 390 concerns, due to a large number of the returns from the producer-distributors and smaller enterprises being incomplete or inaccurate and, therefore, of no value to the survey.

As regards producer-distributors we should emphasize the need for improved accounting standards particularly in regard to the proper division of revenues and expenses between farm and fluid milk distributing operations. We found these to be generally merged, and this in conjunction with insufficient data, has prevented us from submitting a separate analysis of a representative character so far as they are concerned.

We should mention that the 390 concerns tabulated account for approximately 90% of the total domestic sales volume of the industry in the Province.

Our tabulations are also comprehensive geographically, inasmuch as the majority of the communities and counties in the Province are represented. Furthermore, virtually all types and sizes of operation are included. It was from this tabulation of overall operations that a selection was made for the purposes of submitting a form of questionnaire which was primarily designed to provide us with sufficient operating and financial data to permit of more detailed analysis. This questionnaire is referred to later in this report.

Review and tabulation of financial statements showing overall operating results by zones:

In the recording of the submissions, code numbers were employed to ensure privacy, as well as to facilitate handling.

The returns were first sorted into geographical zones covering the whole Province, and record made of the location of the business, its fiscal year end, the amount of annual sales, overall net profits (before provision for income and excess profits taxes), the net book value of fixed assets, and the amounts comprised in loan capital, investments, capital and surplus. In addition, the estimated amount of net profit for the current fiscal year was also recorded.

With regard to the net profits of proprietory businesses, as distinct from incorporated companies, it was found necessary to make many adjustments in respect of proprietors' or partners' salaries in order to ensure proper comparison and a more accurate assessment of each enterprise. In many instances we found that no provision had been made for remuneration to proprietors. In other instances the charge was entirely out of proportion to the size of operation. A scale of remuneration to proprietors and partners was accordingly prepared and applied throughout our calculations, thus placing proprietory businesses on a uniform basis so far as this item of expense is concerned and permitting a comparison with incorporated companies of similar size.

The Province was first divided into three geographical divisions; namely, western, central, and eastern. (Northern Ontario is included in the central geographical division.) Then the western and central areas were each sub-divided into three sections and the eastern into two, making eight zones, substantially in accord with the "milk-sheds" adopted for price control purposes.

Exhibit "A" attached, shows the counties or districts comprised in each zone and the number of distributors and producer-distributors located in each zone, county or district of the Province, divided as between proprietory concerns and incorporated companies. In the last three columns is shown the number of each type of concern from whom financial statements were received, reviewed, and incorporated in our tabulation. The figures do not include the branch establishments of the three large distributive concerns.

It will be noted that a substantial proportion of the limited liability companies responded with sufficiently complete returns to permit their inclusion in our tabulations; the standard of the returns from the smaller proprietory businesses, however, was such that many of them were unacceptable.

Classification of businesses by sales volume:

As regards the three major distributive concerns, each of them conduct operations in one or more provinces of the Dominion in addition to Ontario, the largest also engaging in export business on a substantial scale. Two of the three companies conduct branch operations throughout the Province, the third confining its activities largely to the Ottawa and Toronto areas.

The great majority of the independent distributors, however, have one place of business and serve the community in its immediate vicinity.

The variation in the individual sales volume of these independent concerns is considerable, and having regard to the influence of volume on net profits, it was decided to tabulate the returns by sales ranges. Six classifications, or groupings, were made, ranging from businesses with a sales volume of less than $20,000 per annum, to those with annual sales in excess of $500,000 per annum.

Review and Tabulation of Questionnaires:

Of the 387 independent concerns whose financial statements were tabulated, it was decided to request a fair proportion of them to complete a form of questionnaire. In making this selection consideration was given to the standard of financial statement submitted, geographical location, character and size of operation, type of business, as well as other factors, so as to ensure a fully representative cross-section of the industry from all viewpoints.

The questionnaire itself included two exhibits, relating to the financial position and operating results, and ten schedules designed to provide operating and statistical data regarding sales and selling prices, costs of raw materials and ingredients, cost of processing, selling and delivery expenses, administrative and general expenses, as well as wage rate and labour data. Instructions regarding completion were appended so as to avoid misinterpretation as far as possible and ensure uniformity of answer. In designing the questionnaire, consideration was given to our minimum requirements, also the facility with which it might be completed by the majority of distributors selected.

General:

We believe that the foregoing broadly covers our approach to the problem and the procedures followed, but reference should be made to the difficulties experienced in obtaining the required information, necessitating in a number of cases personal visitation and discussions either with the distributing concerns or their auditors.

As regards the submission of financial statements, it became necessary to send many follow-up letters due to dilatoriness on the part of many concerns and in a number of instances, to lack of the most elementary financial data, in which case, copies of income tax returns were requested.

Before the statements were passed for tabulation, each one required to be scrutinized for any extraordinary features requiring explanation, such as, disparities between actual operating results and forecasts, wide fluctuations in earnings from year to year; reasons and particulars of consideration involved in change of ownership, to mention but a few of the numerous points entailing correspondence.

As regards the questionnaires, even though the utmost care was taken in making our selection, substitutions became necessary due to change in ownership, lack of sufficiently detailed records or years of operation, all of which involved communications through one medium or another. Finnally, as with the financial statements, each questionnaire was carefully reviewed for any omissions, irregularities, variations with financial statements already lodged, and many other points.

In all, over five hundred special letters were sent to fluid milk distributors alone and considerably more were received requiring individual attention, in addition to telegrams and telephone calls, which were quite numerous in themselves.

The selection of concerns for questionnaire purposes could not be proceeded with until the tabulations of the financial statements were completed. Although the questionnaires should have been returned by February 12th, 1947, it was not until March that sufficient information had been received to enable us to conduct our analysis on any worth while scale.

In fairness to the operators, however, we are bound to say that the time of the enquiry was very inconvenient inasmuch as the first request reached the distributors when, in many cases, they were preoccupied with the closing of their accounts for the fiscal year, while the questionnaire was received when taxation returns were required to be prepared and filed. Christmas and other holidays also intervened.

Overall operating results for the fiscal year next preceding October 1st, 1946

Overall operating results
387 *independent concerns, by zones:*

Exhibit B attached, summarizes the overall net profits, before provision for Dominion income and excess profits taxes, sales and certain other data extracted by us from the financial returns submitted by the 387 independent distributors. This exhibit does not include the corresponding figures of the three large concerns, as in their case a breakdown by zones or milksheds is not practical. We have, however, included the combined figures of the three concerns in table 2 which follows later in this report.

Commenting on exhibit B we should point out that the sales and net profits shown are the overall figures and include revenues from ice cream, butter, chocolate drink, and other products in addition to fluid milk and cream. As few concerns maintain departmentalized accounts, there was no alternative. Cost and profit margins by product are dealt with later in this report.

Of the 387 financial statements tabulated, 242 were certified by public accountants or other independent persons.

In considering the overall average net profit (before taxes) of 3.02% of sales, we should point out that there are included in our tabulations a few concerns showing operating losses. The great majority, however, show net profits ranging from less than 1% of sales to more than 5%, in a few instances the latter rate being comparable to that of the three largest concerns.

As regards the percentages of net profits between zones as well as in total, we should mention that they closely approximate the results shown by the questionnaires, with the exception of zone 4 which includes the Toronto area. In this connection the questionnaires indicate that the overall net profits, before taxes, for the Toronto area represents 1.77% of sales and not 1.37% as shown in exhibit B. The former percentage being based on a representative cross-section of the area is, of course, more accurate than the latter which simply reflects the result of a straight tabulation of financial statements received and recorded.

Apart from this, exhibit B provides a reliable comparison of the rates of overall earnings between the different zones. The St. Lawrence sector, the northern districts, and the Niagara peninsular sector showing the highest margins and York County and the Ottawa Valley area showing the lowest. It will be noted that the percentages of net profit to capital employed show much the same comparison.

In terms of dollar contribution to overall profits for the entire industry, the position is of course totally different. Toronto, Hamilton, and Windsor areas, with their much greater sales volumes, contribute more dollars to the total overall profits of the industry than other areas enjoying higher rates of earnings.

Other tabulations made by us indicate that the independent distributors of the Province hold investments in Dominion of Canada bonds and other securities in excess of $1,500,000; that the bonded indebtedness, mortgages, and other long term borrowings exceed $2,500,000 and that the depreciated value of fixed assets approximates $8,500,000.

Before concluding our observations on exhibit B, we should mention that, had it been possible for us to include the corresponding figures of the three large concerns, the rates of earnings in relation to sales in probably all the zones would have been higher.

Overall operating results of the three large concerns:

After eliminating the export sales and related profits of the one company engaging in foreign trade on any substantial scale, the combined position may be summarized as follows:

Sales	$35,472,455
Overall net profits (before taxes)	1,593,263
Net profit % of sales	4.49%

The above relates to the sales and net profits realized from production of fluid milk and all other dairy products processed within the Province of Ontario by the three concerns.

The net profit figure of $1,593,263 is after deducting bond interest, provision for employees pension fund, as well as certain other charges and write offs. Some of these charges are substantial in amount and may or may not be allowed as deductions by the income tax authorities. However, in accordance with the principle followed by us throughout the survey we have accepted the figures as submitted.

As regards net profits the combined percentage of sales of 4.49% is almost 50% higher than the overall average of all independents shown at 3.02% of sales. Individually the earnings range from 3.46% of sales to 5.66%.

There are, however, a number of the more successful independent operators whose rates of earnings in relation to sales, exceed those of the three large concerns. They are amongst those establishments engaged in combined operations.

In general we believe that the favourable overall earnings rate of the three major companies may be attributed to diversification of product in conjunction with a relatively high standard of operating efficiency. They maintain branch establishments throughout the Province, in the larger centres, where volume business is assured, and engage in wholesale trade on an appreciable scale.

Each of the three companies conduct large and successful operations outside the Province of Ontario. The profits arising therefrom have been excluded by us, as this report is confined to operations within the Province.

The financial position of the group is inherently strong. Substantial reserves are reflected in the respective balance sheets. Fixed assets have been very considerably depreciated or otherwise written down. Our impression is that the balance sheet valuations are in each case conservatively stated.

With regard to the return of earnings on capital employed, each of the three companies presented a different problem, for just as profits relating to operations in the Province of Ontario only were required to be determined, so capital employed in the Province was similarly required to be ascertained.

In dealing with the 387 independents, our determination of capital employed was substantially in accordance with the provisions of the

Dominion excess profits tax act. It was, therefore, considered that the same principle should be applied in dealing with the three largest concerns, so that a comparable basis would result.

However, as we have already mentioned, each of the three concerns has acquired other businesses in past years on different bases, either by exchange of shares, outright purchase of shares, purchase of assets or by some other method.

These transactions have necessarily complicated the balance sheet positions, so that each of the three companies consider that the amount of capital employed as determined under the provisions of the Dominion excess profits tax act does not fully reflect the actual amount of capital employed in the business.

Having regard to the foregoing, it was thought advisable to obtain more information from each of the three companies, and in particular, separate figures showing, firstly, the amount of capital employed as computed under the provisions of the Dominion excess profits tax act and the proportion thereof applicable to Ontario operations and secondly, an alternative amount which, in the opinion of the officers of the companies, more accurately represented the actual amount of capital employed in the Province of Ontario.

Below we give the amounts reported to us by the companies in respect of each:

Three large companies combined
Capital employed in the Province of Ontario
relating to the fiscal year next preceding October 1st, 1946

	Capital employed	Net profit before taxes	% of capital employed
(a) Amount submitted by the companies as representing the actual amount of capital employed	$26,190,355	$1,593,263	6.08
(b) Amount as computed under the provisions of the Dominion excess profits tax act	9,250,546	1,593,263	17.22
Difference	$16,939,809		

With respect to item (a) it should be pointed out that a total sum of $20,300,560, representing goodwill is included therein, whereas item (b) includes but $3,360,751 for goodwill of which only $389,585 is incorporated in the financial statements.

The amount of $20,300,560 is substantially comprised of the excess of the market value of the shares, (as stated by the three companies) issued to the vendors of the various businesses, over the nominal or par value of such shares.

Inasmuch as it constituted additional consideration to the vendors, over and above the amounts paid them for net tangible assets, it affords a good indication of the value placed by the three large companies on the acquisition of the various businesses as going concerns.

It should also be pointed out that item (a), i.e., amount submitted by the companies as representing the actual amount of capital employed of $26,190,355, does not include the sum of $3,795,228 which one of the companies reports "represents the write off to capital of certain idle equipment and a write down during the depression in the early 1930's of excessive values of certain operating equipment to bring the book value in line with what was then considered the current market values."

Overall operating results of 390 concerns (including the three large companies):

In table 2 following is given the combined figures of the 390 concerns included in our tabulations:

TABLE 2

Summary of overall operating results of 390 dairy distributing businesses located in the Province of Ontario for the fiscal year next preceding October 1st, 1946.

(Export sales and profits thereon are not included)

	Sales	Net profits (before taxes)		Capital employed	
		Amount	% of Sales	Amount	Profit %
Western	$31,256,686	$1,195,315	3.82	$6,987,396	17.11
Central and northern....	37,177,477	1,244,439	3.35	7,338,370	16.96
Eastern...............	12,848,691	537,696	4.18	2,802,255	19.19
	$81,282,854	$2,977,450	3.66	$17,128,021	17.38

For the purposes of the above table capital employed has been calculated substantially in accordance with the provisions of the Dominion excess profits tax act for all concerns including the three large companies. In their case the total amount has been apportioned over the three geographical divisions on the basis of sales.

Classification of independent businesses by sales volume and by zones:

We give below a summary of the number of concerns in each of the six sales groups as shown on exhibit C:

Group No.	Number of concerns
1	65
2	118
3	79
	262
4	69
5	39
6	17
Total	387

The above discloses that, of the 387 independent concerns tabulated, 262 are relatively small enterprises having an annual sales volume not exceeding $100,000. The average annual sales volume for this group is $40,313. The combined sales total is $10,561,938, representing 23.06% of all sales recorded in the exhibit, whereas the profit contribution of $275,430 to the total earnings of $1,384,187 represents 19.90% showing that, proportionately, the profit contribution of the smaller enterprises is less than their contribution to total sales.

Losses by independent businesses:

Out of 387 independent concerns included in our survey, 45 operated at a loss during the fiscal year next preceding October 1st, 1946. The losses ranged from $14 to $10,578 and aggregated $61,379, which amount has been allowed for in arriving at the overall profit figure of $1,384,187 per exhibit B.

Out of the 45 concerns only 14 have indicated that they anticipated another year of loss on about the same scale. The majority expected substantial improvement and a fair profit margin.

To this extent these particular 45 concerns cannot be considered as providing any index to the earnings potential of the industry, nevertheless, it has been thought advisable to include them in our tabulations so that the fullest representation is accorded in this report.

Of the concerns incurring losses two are located in each of the cities of Hamilton, Brantford, and St. Catharines. Nine are located in Toronto, and their losses combined aggregate $27,761, or 45.23% of total. Below in table 3 is given a breakdown by zones:

TABLE 3

Summary of independent concerns showing losses
for the fiscal year next preceding October 1st, 1946

Zone	No. of Concerns	Total
1	–	–
2	8	$11,260
3	5	3,470
4	13	31,257
5	8	5,640
6	5	4,300
7	3	1,325
8	3	4,127
Total	45	$61,379

Twenty-nine of the concerns are in the three groups having annual sales volume of less than $100,000.

The total sales of the 45 concerns for the twelve month period was $4,370,330 or 8% of the total of all independents. The loss of $61,379 represents slightly more than 1% of sales.

Analysis of operating statements
of representative cross-section of industry:

From amongst the questionnaires returned to us, an analysis of operating costs was made of 41 concerns located in thirty different counties throughout the Province, each of the eight zones being represented. The group comprised proprietory businesses and partnerships as well as incorporated companies, and each of the six sales groupings are included. Accordingly, it is submitted that the concerns combined present a fairly representative cross-section of the industry excluding the three largest concerns.

Of the 41 concerns, five incurred losses, the remainder showing net profits, before taxes, ranging from less than 1% to more than 6% of sales.

Exhibit D, attached, provides a breakdown of operating costs under the four standard headings, while exhibit E gives a breakdown by elements of cost, i.e., materials, labour, and cost of facilities.

It will be noted that the combined overall net profits of these 41 concerns was 3.07% of sales as compared with 3.02% shown in the tabulation of 387 independents per exhibit B. A comparison by zones reveals the following:

TABLE 4

Comparison of net profit margins by zones

Exhibit B	Zone	Exhibit D
%		%
3.64	1	3.34
2.54	2	2.63
4.08	3	4.49
1.37	4	1.77
4.16	5	4.16
4.19	6	4.58
1.52	7	1.89
4.43	8	4.39
3.02	Overall	3.07

The three main divisions of the Province compare as follows:

3.41	Western	3.51
2.66	Central and Northern	2.87
3.17	Eastern	3.01
3.02	Overall	3.07

Having regard to the similarity of the figures which were arrived at separately by two entirely different methods, we consider that the foregoing tabulation and related exhibits indicate, with reasonable accuracy, the overall profit margins of independent fluid milk distributors by zones as well as for the Province as a whole.

Commenting on the cost breakdown given in exhibit D, it would appear that the explanation for the low rates of earnings in both zones 4 and 7 is due to relatively high material costs and excessive selling and delivery expenses. The low material costs in zones 3 and 8 would seem to account for the more favourable profit margins in those areas, while as regards zones 5 and 6, economic selling and delivery expenses appear to be largely responsible for the satisfactory rates of earnings.

Processing costs in both the Toronto and Windsor areas compare favourably with the other areas, but zone 7 shows an especially low cost.

As regards exhibit E we would direct your attention to the repair costs and provision for depreciation. Collectively they account for almost 4% of total sales revenue and approximate 13% of the total depreciated book value of buildings, machinery and equipment for the group.

Selling and delivery wages are a most important element of cost and there appears to be considerable variation in this item between the different zones.

Financial position of industry

A review of the comparative balance sheets for the two years ended in 1939 and 1945/6 forming part of the questionnaire, clearly indicated that the financial position of fluid milk distributors has improved appreciably since 1939. In evidence of this statement we give below certain data relating to a representative group of independent operators. The position of the three large concerns has already been referred to.

Each of the concerns showed an improved financial position, although there exists considerable variance in their individual achievements over the period of six or seven years.

Net profits for the concerns aggregated $874,573. During the period of six years a net total of $370,755 was added to the reserves for depreciation giving a total to be accounted for of $1,245,328. This amount was applied as follows:

Expended on:		
Additions to fixed assets (land, buildings, machinery and equipment)		$ 706,259
Additions to current assets (principally Dominion of Canada Bonds)		467,447
		$1,173,706
Income and excess profits taxes	$ 311,787	
Drawings, dividends, and surplus adjustments	264,377	576,164
		$1,749,870
Deduct:		
Increase in current liabilities	$ 296,411	
Increase in capital and funded debt	208,131	504.542
		$1,245,328

The total withdrawals for dividends, drawings, taxes, etc., of $576,164 represents 65.88% of total earnings of $874,573. Inasmuch as current liabilities have increased by $296,411 and current assets by $467,447, the working capital position has improved by $171,036. In this regard it should be mentioned that due to the elimination of charge accounts and the introduction of the ticket system the working capital requirements are less today than in 1939, despite the increased sales volume which, together with better profits, explains why the industry has been able to make such substantial investments in Dominion of Canada bonds and other securities during recent years.

The capital and surplus accounts for the concerns combined, totalled $532,683 at the close of 1939. From that time to the close of 1945/6 net profits (before taxes) aggregated $874,573. Thus, the earnings over the period, before taxes, represents 164.18% of the total capital and surplus as at the commencement of the period, i.e., 1939 and, after taxes, 105.65%.

The net additions to reserves for depreciation after adjusting retirements and write-offs for the years 1940 to 1945/6 total $370,755. Over and above this are the charges in respect of repairs and maintenance, which approximate 2% of sales for a total of about $420,000. Thus, we find that depreciation charges, repair costs, and other adjustments combined, for the period 1940 to 1945/6 inclusive, approximate $900,000.

In relation to this it should be mentioned that the net depreciated value of land, buildings, machinery, and equipment at December 31st, 1939, for the combined concerns totalled $551,922. Since that date the sum of $706,259 has been expended on fixed assets.

In reviewing the questionnaires, it was found that only two concerns out of the group were carrying fixed assets at appraised values.

Before leaving the matter of fixed assets, it should be mentioned that the output of the group has more than doubled since 1939 and, therefore, increased cost of wear and tear might be expected, although the equipment has, in the main, only been subject to single shift operation. On comparing 1939 figures with those of 1945/6 we find the following:

	1939	1945/6	Increase	% of Increase
Provision for depreciation	$55,214	$ 94,997	$39,783	72.05
Repairs and maintenance	44,836	104,920	60,084	134.00
	$100,050	$199,917	$99,867	99.82

While there may be a certain amount of automotive equipment used in delivery service which has passed the stage where it can be operated economically, it would seem that ample provision has been made for its maintenance and retirement as new replacement vehicles become available.

As regards plant and processing equipment it would seem reasonable to assume that it has been maintained in a thorough manner and replacements, improvements, and additions made as and when deemed appropriate by the respective managements. As the result of the improvement in the liquid position during recent years future purchases of equipment can be made on a substantial scale without dislocation of finances.

Wage Rates and Labour Costs

From amongst the questionnaires submitted by the independent distributors throughout the Province, a number were selected for detailed analysis. The group comprised incorporated companies and proprietory businesses. All of the eight zones were represented, and the concerns have annual sales volumes ranging from $35,000 per annum to more than $1,500,000. To this extent the group may be considered as providing a representative cross-section of the independent distributors of the Province.

Our tabulations for the group covered the processing and distribution of 14,534,547 quarts of fluid milk, cream, chocolate drink, and buttermilk in 1939 and 29,967,573 quarts in 1945/6. This indicates an increase in sales volume of 106.18% since 1939 which is much the same as the increased consumption of such fluid products for the entire Province.

Such increased production necessitated additional help and the personnel of the processing, distributing and administrative departments were supplemented as follows:

TABLE 5
Number of Employees

	1939	% of total	1945/6	% of total	Increase	% of increase
Processing	87	27.02	149	29.45	62	71.26
Selling and delivery	191	59.32	291	57.51	100	52.36
Administrative	44	13.66	66	13.04	22	50.00
	322	100.00	506	100.00	184	57.14

The foregoing indicates that an increase in quantitative sales volume of 106% necessitated an increase of only 57.14% in personnel.

In addition to increased personnel such expansion necessarily entailed extensions and improvements to existing plant and equipment. In the main, the required funds were obtained from the respective treasuries without the necessity of borrowing or raising additional capital.

As with virtually every industry, wage rates increased substantially during the war years, and this, combined with the additional personnel, entailed greatly increased payroll disbursements. Our tabulations show the following comparison for the group as a whole, which as we have stated, provides a fairly representative cross-section of the Province.

TABLE 6

Total Payroll Disbursements

	1939	% of Total	1945/6	% of Total	Increase
Processing	$108,804	23.47	$251,598	25.59	$142.794
Selling and delivery	280,669	60.54	596,016	60.61	315,347
Administrative and general	74,154	15.99	135,741	13.80	61,587
Total	$463,627	100.00	$983,355	100.00	$519,728

Comparison with table 5 shows that whereas the number of personnel engaged in selling and delivery in 1945/6 was 52.36% greater than in 1939, payroll requirements were considerably higher, indicating that there must be a substantial element of wage rate increases. In this regard, we submit the following:

TABLE 7

Comparison of Average Weekly Wage Rates

	1939	1945/6	Increase	% of Increase
Processing	$24.05	$32.47	$ 8.42	35.01
Selling and delivery	28.19	39.39	11.20	39.73
Administrative and general	31.63	39.03	7.40	23.40
Combined	$27.54	$37.31	$ 9.77	35.48

It will be noted that the weekly wage rates of the selling and delivery division have advanced the most, and as 57.51% of the total personnel are engaged in this phase of the business, it constitutes the major part of the burden. It is, in fact, a most important element of cost so far as the distributive industry is concerned, as selling and delivery wages and commissions represent approximately 65% of total selling and delivery expenses.

To what extent female labour may have been employed to offset increased male rates is not known, but we believe table 7 above affords a reasonably accurate indication of the increased wage rates of the independent distributors from 1939 to the early part of 1946.

Turning to the effect of the foregoing on the costs of production and distribution, it was found that the greatly increased output combined with improved standards of efficiency, also wartime economy measures, enabled the group of concerns under review to absorb the greater part of the increased wage disbursements. It appears that the benefits resulting from these factors virtually offset the entire amount of the increased wages.

By dividing the total number of quarts of fluid milk, cream, chocolate drink, and buttermilk sold by the group in 1939, totalling 14,534,547 quarts into the total payroll disbursements, we find that the total labour content in 1939 was 3.1899 cents per quart, whereas in 1945/6, largely as a result of the increased sales volume, the labour content had advanced to only 3.2815 cents per quart as follows:

TABLE 8

Labour Cost Per Quart

	1939 Cents	1945/6 Cents	Increase Cents	% of Increase
Processing	.7487	.8396	.0909	12.14
Selling and delivery	1.9310	1.9889	.0579	2.80
Administrative and general	.5102	.4530	*(.0572)*	*(11.21)*
	3.1899	3.2815	.0916	2.87

It will be noted that the saving in administrative and general office salaries and bonuses calculated on a unit basis, practically offset the increase in selling and delivery wages, due to the number of personnel in the administrative and office section of the total payroll, advancing only 50% numerically and only 29.90% as regards average weekly wages as against a quantitative volume increase of 106%.

In support of the foregoing we should say that, although the information which we have on man hours is limited, we have, nevertheless, made certain calculations regarding 1939 and 1945 which indicate a saving in the latter year of approximately 24% in elapsed time in the processing and distribution of fluid milk.

In considering the foregoing matter of labour costs it should not be overlooked that the standard of industrial relations within the industry has improved considerably since 1939, according to the questionnaires. Working hours have been reduced and many concerns grant statutory holidays and a minimum of one week's vacation with pay plus time and one-half for overtime. It was noted that a number of the larger companies have agreements with recognized trades union organizations.

Only very few of the distributors appear to provide for pensions to employees either on a contributory or non-contributory basis.

The foregoing serves to demonstrate the ability of the industry to absorb increased wage rates within certain limits when a progressively improving market for its products prevails.

Selling and Delivery Expenses

Taking the same representative group of concerns, it was found that in 1939 the combined selling and delivery expenses were $433,459 of which $280,669, or 64.75%, was represented in wages and commissions. As the result of increased sales, requiring additional personnel, also advances in wage rates, as well as other expenses, the total in 1945/6 was $868,998, or 100.48% greater, of which wages and commissions aggregated $596,016, or 68.59%. Other expenses, including advertising, depreciation, repairs, gas, oil, feed, insurance, etc., had, therefore, risen from $152,790 in 1939 to $272,982 in 1945/6 an increase of 79%.

To provide adequate delivery service, 101 additional vehicles were employed making a total of 260 in 1945 as against 159 in 1939. Of the new vehicles acquired, 53 were horse-drawn and 48 automotive. This additional equipment in itself was insufficient to take care of the increased volume, but means were found whereby the vehicles carried about 25% more quarts of fluid product in 1945/6 than in 1939.

Overall it seems that the ratio of horse-drawn vehicles to total was about the same in 1945 as in 1939. Local conditions, routes, and deliveries, no doubt, have some bearing on the matter, but whether the relative operating cost of horse-drawn vehicles as opposed to automotive is fully considered, we are unable to say. From such figures as are available, it appears that in urban centres at least the horse-drawn vehicles are more economical from the viewpoint of capital outlay, as well as operation cost, but, of course, individual cases require to be separately considered.

As with most other purchases, the larger concerns probably enjoy better terms in both the original purchase and the subsequent repair cost of delivery equipment, than the smaller enterprises. When it is considered that the initial outlay for delivery equipment of the group in question approximated $350,000, it is an important item.

Advertising expense for the group increased from $16,239 in 1939 to $26,140 in 1945/6 or 61%, although in relation to sales it bears a lesser percentage in 1945/6 than in 1939 when it equalled less than one percent.

Although it is not an important item from an expense viewpoint, the necessity of it might be questioned as such expenditures are frequently lost sight of.

Most of the group are operating on a seven day delivery schedule.

Tests made of the quantities of fluid milk sold per route indicate that deliveries have increased approximately 35% per route since 1939.

As a further test of the relative economy in operation between 1939 and 1945/6 it has been estimated that the quantity of milk delivered in 1945/6 per employee is 30% higher than in 1939.

The matter of routes, deliveries, and related costs is a potent factor in the operations of the distributive industry and should, we believe, be the subject of further study, as the response to our questionnaire suggests a lack of basic information on the part of many distributors on this most important matter.

The cost of delivery and selling expense per quart of milk is influenced considerably by the proportion of wholesale volume to total, but due to lack of information we have not been able to determine the extent.

Administrative and General Expenses

For the same group of concerns this overhead item might be broken down as follows:

	1939	1945/6	Increase
Salaries	$ 74,154	$135,741	$ 61,587
Sundries	54,271	97,185	42,914
	$128,425	$232,926	$104,501

The salaries item has already been dealt with under the heading of "Wage rates and labour costs". Despite the appreciable dollar increase, this item represents only 3.01% of sales for 1945/6 as against 3.31% in 1939.

The sundries item comprises depreciation on office equipment, telephone, stationery, postage, and similar items of expense.

Considering the amount of increase, and having regard to the business developments of recent years, requiring more clerical help than previously, as well as the low ratio to total sales, the expenditure does not seem unreasonable.

Contrasts in operating results

Our survey brought to light many contrasting results between reasonably comparable concerns operating in the same area, which on analysis were in most instances found to be attributable to one or more of the following factors:

(a) variations in average unit selling prices due to different proportions of wholesale or retail trade to total sales;
(b) variations in the sales volume of the different products;
(c) differences in the average cost of whole milk and other materials and supplies;
(d) variations in the operating costs of vehicles, excluding wages;
(e) wide disparities in the dollar sales per vehicle and per employee;
(f) variations in efficiency of manpower;
(g) differences in repair and maintenance costs.

In regard to variations in efficiency of manpower (item f) we would cite a comparison between two concerns in the same city where the wage rates of one were found to be 20% higher than the other, the hours 6% less, yet a lower labour cost per unit was indicated. The same company showed substantially more dollar sales per employee and per vehicle than the other, all contributing to a much higher rate of earnings. This particular comparison provided an informative analysis of the various factors contributing to successful operation and attractive profit margins, as opposed to the less profitable.

Items (d) and (e) are, of course, influenced by the volume of wholesale sales in relation to retail sales.

Costs and Profit Margins by products

As we have mentioned, it would appear that relatively few concerns maintain records showing the cost of the various products dealt in, while those that do, provide contrasting figures which were difficult to reconcile in many cases.

Even amongst the three large concerns the total costs reported to us show wide disparities. For instance, as regards fluid milk, total costs in 1945 were reported at 12.[illegible] cents by one concern, 11.75 cents by another, and 11.93 cents per quart by the third. Butter costs were reported by one company at 32.08 cents per pound and also by another at 37.85 cents, yet both companies showed losses on the product.

A representative group of independents showed the cost of fluid milk at 11.93 cents per quart and cream at 42.85, as against 39.04 per quart for one of the three large concerns. Ice cream for the group of independents was costed at $1.09 per gallon and by one of the three large companies at 95.85 cents. Chocolate drink seemed to be fairly uniform at 12.41 cents per quart.

The quality of the product has considerable influence on the cost but what is perhaps the most important factor is the apportionment of overhead and indirect expenses between the different products. In this regard the introduction of some standard accounting practice is essential if reasonably accurate unit costs and profit margins are to be determined and proper comparisons made possible as they should be. From the cost data submitted it was found that some concerns were apportioning indirect charges on the basis of dollar sales of each product, others on the material cost, while in one instance product costs were arrived at by deduction, on the assumption that all products carried the same profit margin, demonstrating a lack of appreciation of accounting principles.

With the substantial volume involved on all the products mentioned, a discrepancy of a fraction of a cent in the unit cost totals a considerable amount over the period of a year and may make the difference between a profit or a loss being indicated on the particular product.

The determination of profit margins by products is not only dependent on accurate costs but also on the proper breakdown of selling prices by the different types of sales outlets and here again we find that relatively few concerns maintain adequate records. It appears that the majority do not record the units sold and the sales value of each product according to sales outlet.

Many distributors engage in wholesale trade as well as retail and in the case of fluid milk the wholesale selling prices carry an average discount of about 12½% off retail equal to 2 cents per quart at present price levels according to the questionnaire submitted. Part of this discount is no doubt offset by savings in delivery and selling expenses on wholesale deliveries as compared with retail but the extent we have been unable to determine due to lack of sufficient data.

Where the wholesale volume is substantial the effect on the overall average selling price per quart is considerable and if the figures are accepted without enquiry, the impression may be left that the margin of profit on all fluid milk is extremely narrow, whereas through analysis, it might be determined that, in some instances at least, an actual loss is being incurred on wholesale sales and a fair, or perhaps appreciable, margin of profit on retail. Under such circumstances, the consumer would be virtually subsidizing the wholesaler.

The matter of wholesale prices is dealt with later in this report, but in considering profit margins by products the subject has an important bearing.

Based on the information available to us and such analysis as we have made of financial statements and questionnaires, we believe that the figures given in tables 9 and 10 which follow, may be used as a basis of comparison or as a standard of measurement for the distributors of dairy products in the Province of Ontario.

The figures themselves relate to the fiscal year immediately preceding October 1st, 1946, but based on examination of financial statements and questionnaires relating to the year ended December 31st, 1946, we also believe they are indicative of the costs and profit margins by products for that year.

The selling prices shown represent the overall average for retail, wholesale, and surplus sales combined:

TABLE 9

Selling prices, costs, and profit margins by product for the fiscal year next preceding October 1st, 1946

	Unit	Selling Price (Cents)	Cost (Cents)	Profit (Cents)	% Profit of Sales
Fluid Milk	quarts	12.31	12.10	.21	1.71
Fluid Cream	quarts	44.00	41.36	2.64	6.00
Chocolate Drink	quarts	13.79	12.41	1.38	10.00
Ice Cream	gals.	117.00	99.45	17.55	15.00
Butter	pounds	38.00	38.76	*(.76)*	*(2.00)*
Cheese	pounds	20.00	19.25	.75	3.50

Were all sales made at the maximum retail prices profit margins would of course be improved.

For the year 1945 the average retail selling value, including consumer subsidy of 2 cents per quart of fluid milk was slightly less than 13 cents per quart. For 1946 the average retail or household price was 13.46 cents per quart due to the incidence of the three cent advance effective from October 1st, 1946.

An analysis of sales, as reported by the distributors, was undertaken by the Royal Commission which disclosed that the volume of household sales represented 73.93% of total and wholesale and storekeeper sales combined 26.07%. The latter averaged 11.43 cents per quart or 2.03 cents below retail and had the effect of reducing the overall average price by .53 of one cent per quart to an average of 12.93 cents.

Our examination indicated that the margin of profit on fluid milk, as well as other products, varies appreciably between different areas and localities.

For the fiscal year immediately preceding October 1st, 1946, it is estimated that for the entire province the cost of whole milk to the distributor, for resale as fluid milk, averaged 7.00 cents per quart and other costs, depreciation included, were as follows:

TABLE 10

Breakdown of fluid milk costs—per quart for the fiscal year next preceding October 1st, 1946

Cost of:	Per quart	% of Sales
Whole milk	7.00	56.86
Processing including bottles, and supplies	1.77	14.37
Distributing and selling	2.65	21.53
Administrative and general expenses	.68	5.53
Total Cost	12.10	98.29
Average selling price—inclusive of subsidy (retail and wholesale combined)	12.31	100.00
Net Profit per quart	.21	1.71

The above indicates that for the year under review an average spread existed between the cost of whole milk, per quart of fluid, and the average selling price of the distributor of 5.31 cents per quart, of which all but .21 of one cent was expended on costs of processing, distribution, and administration.

As will be seen later in this report, this profit margin of .21 of one cent has been increased as the result of the increase in consumer price effected October 1st, 1946.

The figures shown in table 10 above are based on data furnished by distributors. The cost of wholemilk, shown at seven cents per quart is, however, appreciably higher than that indicated by official statistics for the year under review. This difference may be partially due to a combination of several factors, including lack of information in allocation of material costs, shrinkage, premiums paid for high test milk, etc.

Selling Prices—Fluid Milk

Consumer prices:

We believe that complete data regarding past and present selling prices is in the possession of the Commission either in the form of evidence, briefs, or correspondence, so that we see no useful purpose in embodying such data in this report.

As an overall indication, the consumer price has advanced approximately from 12c per quart in 1939 to 16c as at the date of this report, an increase of 33 1/3%. Again as a general statement, producer prices, delivered at plant, have advanced from $2.10 per 100 lbs. of whole milk to $3.42 over the same period (1939-1947), an increase of approximately 65%. Different areas and centres, of course, show varying increases.

In 1941 federal price control was introduced, followed by subsidies in 1942. The extent to which these measures may have benefited the industry would be most difficult to determine. However, a very substantial increase in volume occurred during the war years, particularly in the metropolitan centres and urban districts, and this is probably the chief factor in providing the industry with perhaps the most profitable years in its history. As the larger concerns serve the more populated areas, it seems reasonable that they benefited to a greater degree than the smaller enterprises operating in the rural districts.

The termination of the producer and consumer subsidies in 1946 and the lifting of ceiling prices on certain products, made necessary a review of all operating costs as well as the purchase and selling prices of both the producers and distributors. Negotiations took place, as a result of which, effective October 1st, 1946, the Milk Control Board approved of an increase in the consumer price of three cents per quart of fluid milk and an increase in the producer selling price of $1.00 per 100 lbs. of whole milk, equal to 2.63158 cents per quart of fluid milk.

It would appear that the distributor benefited by the difference of .36842 of one cent per quart. Thus, on an annual consumption of 430 million quarts the additional gross revenue would be $1,584,206 over a twelve month period.

Our survey shows that the financial position of the industry as a whole in the Province of Ontario is the strongest since 1939, and that the overall earnings for 1946 were not materially different from those of 1945 which was a record year up to that time. It is also apparent that the greatly increased sales volume of fluid milk and other products since 1939, combined with improved efficiency and the continuance of certain economy measures introduced during the war years, have not only enabled the industry to absorb all increased costs, but also improve its financial position and earnings on an appreciable scale.

Wholesale prices:

Under present regulations there is no distinction made by the Milk Control Board between wholesale and retail types of businesses; the license permitting the licensee to engage in either, and develop his own sales policy as he chooses. Furthermore, there does not appear to exist any specific definition of what constitutes a wholesale sale as distinct from a retail transaction or other sale. For instance, in the Toronto area, which is one of a number of areas in the Province where the distinction is officially recognized, a wholesale sale is described as "any accounts except retail accounts, storekeeper accounts and hospital accounts". (See M.C.B. Order No. 42-2 dated January 27th, 1942.)

From information obtained it would appear that, as regards fluid milk and cream at least, a retail sale is considered as such by the industry when delivery is made by the distributor at the residence of the customer or sold over the counter at the established retail prices.

Where the product is sold to a store for resale to the consumer it is considered as a storekeeper sale, while the term "hospital accounts" would appear self-explanatory. Thus, it would seem that any sale not conforming with the terms of these three headings would be classified as a wholesale sale, regardless of the status of the buyer or the ultimate disposition of the product.

We understand that sales to chain and departmental stores are classified both as storekeeper sales, and as wholesale sales depending on the provisions of the related Milk Control Board Order for the locality in which the sale is made. Where no related order exists, such sales would probably be classified as wholesale sales.

In the aforementioned Order No. 42-2 relating to the Toronto area, wholesale prices are set out and we understand that similar orders embodying price schedules exist for certain other areas, the procedure apparently being, in some cases at least, for the local members of the Distributors' Association to prepare a schedule of prices for submission to the Ontario Milk Distributors' Association and the ultimate approval of the Milk Control Board.

In the main, the bulk of the wholesale business is done by the larger distributors, and, as a result of our enquiries, we were advised that twenty-five concerns might account for perhaps 60% of the entire wholesale volume.

A tabulation of the questionnaires returned to us indicated that eleven concerns were selling no less than 44% of their total fluid milk at wholesale prices ranging from one cent to two and one-half cents per quart less than the household price, whereas, in the absence of official statistics, we have been advised that wholesale sales might approximate 17% of volume. Accordingly the Royal Commission decided to make an independent investigation of the monthly returns of distributors to the Statistics Branch of the Ontario Department of Agriculture.

The analysis revealed that for the year 1946 wholesale sales represented 26.07% of total volume as shown hereunder:

	Quarts	% of Total	Cents Per Quart	Value
Household sales	345,796,207	73.93	13.46	$46,549,915
Wholesale and storekeeper sales	121,939,793	26.07	11.43	13,938,945
Total	467,736,000	100.00	12.93	$60,488,860

We attach considerable importance to the proper recording and control of these wholesale sales and would emphasize the need for official statistics regarding them.

Mention might also be made of the prices announced by the trade following the price increase of October 1st, 1946. The Windsor and district trade advanced the prices of pints and half pints of milk, chocolate drink, and buttermilk by the equivalent of four cents per quart, the prices of quarts and gallons only being increased by the three cents authorized.

Under the heading of "Costs and Profit Margins by Products", (table 9), we have given the overall average selling prices of certain products for the fiscal year next preceding October 1st, 1946. Below in table 11 we give a few selections of the average wholesale and retail prices prevailing in certain counties.

TABLE 11

Comparison of Wholesale and Retail Prices for the Fiscal Year next Preceding October 1st, 1946

	Average Retail Price (Cents)	Average Wholesale Price (Cents)	% Wholesale Discount
Essex County			
Fluid Milk	13.33 qt.	11.14 qt.	16.43
Fluid Cream	41.00 qt.	31.39 qt.	23.44
Chocolate Drink	16.08 qt.	12.71 qt.	20.96
Buttermilk	10.10 qt.	8.31 qt.	17.73
Butter	40.17 lb.	38.24 lb.	4.80
York County			
Fluid Milk	13.67 qt.	11.00 qt.	19.54
Fluid Cream	41.00 qt.	37.10 qt.	9.52
Chocolate Drink	15.00 qt.	13.33 qt.	11.14

Buttermilk	9.00 qt.	6.00 qt.	35.00
Butter	45.00 lb.	42.00 lb.	6.67
Frontenac County			
Fluid Milk	12.56 qt.	10.27 qt.	18.24
Fluid Cream	59.25 qt.	46.56 qt.	21.42
Chocolate Drink	13.10 qt.	12.41 qt.	5.27
Buttermilk	5.00 qt.	4.01 qt.	19.80

It will be noted that there is no uniformity between the average prices of the various products in the different counties or in the wholesale discount rate.

As regards the Toronto area, Milk Control Board Order No. 42-2 provides "inter alia" for the following wholesale discounts:

Standard Milk	2½ cents per quart
Chocolate Drink	1½ cents per quart
Buttermilk	3 cents per quart
Hospital Milk	4½ cents per quart

Having regard to the profit margins on the fluid products referred to and the fact that the related Board Order is dated 1942, the above scale of discounts might well be reviewed.

In discussing wholesale and other special prices with the Milk Control Board, we understand there is no systematic check made by board officials regarding so-called wholesale transactions. According to the Board only occasional complaints of price cutting have been received from distributors.

Prices of Plant or Surplus Sales:

In the form of questionnaire under the classification of sales by type of outlet, provision was made for reporting particulars of retail, wholesale, and plant or surplus sales.

Four concerns in different cities reported sales under the latter heading at prices ranging from 3.16 cents per quart to 7.95 cents per quart, the individual volume ranging from less than 1% of total sales to over 11%. Taking the four concerns combined the fluid milk sales aggregated 5,094,578 quarts of which 269,570 quarts or slightly more than 5% were classified as plant or surplus sales, the average price of which was 6.88 cents per quart or practically half the then prevailing retail price.

The prices reported to us and the discounts off retail prices are as undernoted:

	Price per quart	Discount off retail price
Fluid Milk	6.88 cents	45.23%
Fluid Cream	40.01 cents	32.48%
Chocolate Drink	10.63 cents	18.86%
Buttermilk	2.97 cents	40.60%

We are of the opinion that such sales should be fully enquired into by the Milk Control Board and, if necessary, provision made for them to be reported each month to the Statistics Branch of The Ontario Department of Agriculture as such prices would necessarily have the effect of reducing the overall average price of fluid milk sales and the other products involved, if in sufficient volume.

Price Spread—Fluid Milk

Complete information regarding the purchase prices of whole milk is, we believe, in the possession of the Commission either in the form of evidence, briefs or correspondence. Accordingly, we propose limiting our comments under this heading to certain general observations.

In the consideration of price spreads, as with selling prices, allowance should be made for that volume of production sold at wholesale and other special prices, but as we have indicated, there is no statistical information available to show the proportion of wholesale volume to total sales either currently or for past years.

Based on the monthly dairy reports issued by the Ontario Department of Agriculture, the overall average selling price realized by distributors for fluid milk sales in 1946 was 12.09 per quart, exclusive of the consumer subsidy which was terminated in May of that year. In 1945 the average was 10.31 cents and in 1944 10.37 cents per quart on the same basis.

From the same source we find that the average cost of whole milk purchases for fluid consumption in 1946 was $2.66 per 100 lbs. or 7 cents per quart on the basis of 38 quarts per 100 lbs. This indicates a gross spread of 5.09 cents per quart giving a gross margin of 72.71% on raw material cost exclusive of subsidy.

The overall average revenue per quart for the year 1946 was 12.93 cents. With a raw material cost equivalent to 7 cents, the spread becomes 5.93 cents showing a gross margin of 84.71%.

For the first four months of 1947 the overall average selling price per quart is reported at 15.20 cents. Thus, over the period 1944 to 1947 the revenue per quart, inclusive of subsidy, where applicable, has been as follows:

1944	12.37 cents
1945	12.31 cents
1946	12.93 cents
1947	15.20 cents

During the first three months of 1947 the cost of whole milk purchases has averaged $3.42 per cwt. delivered at plant, which on the basis of 38 quarts per 100 lbs. is equivalent to 9 cents per quart leaving a spread of 6.20 cents or 68.89% gross margin.

Regarding 1939 the average cost of whole milk for fluid purposes to the distributor approximated $2.10 per cwt. equal to 5.53 cents per quart on a 38 qt. basis. Against this the overall average selling price approximated 11.50 cents per quart giving a spread of 5.97 cents per quart equal to 108% gross margin. Thus, the following trend is indicated:

TABLE 12

Trend in Selling Prices and Gross Margins

	Overall Average Selling Price Per Quart (cents)	Average Cost to Distributor Per Quart (cents)	Gross Spread (cents)
1939	11.50	5.53	5.97
1946	12.93	7.00	5.93
1947 (to April 30)	15.20	9.00	6.20

It will be noted that on the basis of fluid milk quarts, the whole milk purchase price has increased by 3.47 cents since 1939, while the overall average selling price has advanced 3.70 cents so that the distributive industry today would seem to be better off by 23 cents per 100 quarts than in 1939. Taken in conjunction with the increased volume this constitutes an appreciable advantage.

This observation is predicated on the accuracy of official statistics which as we have pointed out on page 45, appear to show an appreciable difference, (55c per 100 quarts), from the costs reported by the distributors. Producers' subsidies have quite properly not been taken into account in either calculation.

Purchases of Whole Milk at Secondary Prices

Distributors have always been required to pay the basic price for fluid milk sales but a change in the determination of quotas has occurred since 1942 which has some bearing on the subject.

Prior to that time secondary milk purchases for the different areas were covered by separate Board orders, although in principle they were much the same, whereas at present such purchases are covered by one provincial wide order. When this change occurred, in 1942, quotas were required to approximate sales, whereas before, the quotas were set in excess of estimated sales.

Under this latter arrangement distributors were required to pay at least 85% of the quota at the basic price, even though such portion might exceed actual fluid milk sales, no more than 15% of the quota being eligible for purchase at the secondary price and then only for purposes other than fluid milk sales.

The regulations now in force require the distributor to pay the basic price for either the quota or sales quantity whichever is the higher, there being no obligation on the producer to deliver in excess of such quantity. If, however, with the consent of the distributor, he elects to do so, secondary price can apply on any quantity they may agree upon, provided of course the milk is used for other than fluid purposes.

Official statistics indicate that in each of the years 1945 and 1946 whole milk purchases by commercial dairies exceeded fluid milk sales by about 160 million pounds, but there are no records to show the products, or quantities of each, into which such purchases have been converted, neither are there statistics to show the quantity which was paid for at the secondary price.

In discussing the matter with the Milk Control Board we were assured that only a very small proportion, if any, would be processed into fluid milk. Virtually all would be converted into products for which the secondary price is applicable, such as cream and packaged cheese, chocolate drink, buttermilk, etc.

In support of this statement we were informed that inspectors and auditors of the Board make test checks of the records of distributors about twice a year and complete form number E1998 at the completion of each inspection. This applies to markets other than those where the producers, by arrangement with the distributors, have their own auditors conduct such examination, as in Toronto and certain other markets. Our enquiries also elicited that there occasionally occurred instances where whole milk, purchased at the secondary price had been processed into fluid milk and sold at the retail price, but the quantities involved were said to be insignificant and remedial measures, satisfactory to the Milk Control Board, had been taken in every case.

As regards the supply of whole milk at the secondary price the position is equally obscure. We are informed that the distributors draw from the regular producers as well as the cheese factories, creameries and condensaries, but the quantities drawn from each source and the prices paid are not known. In this connection we made certain comparisons between the average prices paid for whole milk and the basic prices applicable to certain markets. These indicate that purchases are made at the secondary price in most markets throughout the Province and that the quantity purchased may be quite substantial in the aggregate although varying considerably between different markets.

The spread between the basic price and the secondary price varies between districts (the butter-fat premium is also slightly different), but as a general indication the secondary price approximates $1.00 less per 100 lbs. than the basic, a considerable reduction and sacrifice from the producer's viewpoint, but one which they were evidently prepared to make, provided the distributors used such secondary purchases in products other than fluid milk.

In this connection we have the assurance of the Milk Control Board that reasonable precautions are taken and the necessary procedures are in effect to keep any abuse to a minimum, but having regard to the lack of basic statistical data, without which the proportions and complexities of the problem cannot be properly assessed, we find it difficult to understand how such an important matter can be fully and satisfactorily controlled.

We believe that this subject should be discussed with the Statistics Branch and the producers' and distributors' associations without delay, as some clarification seems desirable so far as the monthly dairy report itself is concerned. As we have indicated the Milk Control Board claims that little, if any, of the secondary milk is converted into fluid and sold at the established prices, yet the quantity, whatever it might be, is included in the dairy report under the heading of "Total purchases of milk and cream by commercial dairies for fluid sales in Ontario."

Consumer Subsidy

A consumer milk subsidy of two cents per quart was introduced by the Dominion Government effective December 16th, 1942, and continued until May 31st, 1946, when it was terminated. During this period of approximately 3½ years the sum of $29,649,963.97 was disbursed by the Dominion Government agency and paid to the fluid milk distributors in the Province of Ontario. This amount averages $8,471,418 per annum and may be apportioned as follows:

1942—December 16th to the end of 1943	$ 8,856,010
1944	8,199,280
1945	8,658,814
1946—January 1st-May 31st	3,935,860
	$29,649,964

The subsidy was paid as part of the Dominion Government's overall price control and supply policy as applied to essential foods, materials, and commodities, and accordingly the consumer price was "rolled back" by 2c per quart and subsidy for a like amount paid to the distributors.

The arrangement was beneficial to the consumer as well as the distributor and producer, inasmuch as consumption was no doubt stimulated and volume production and supply thereby promoted. The effect being to place the consumer price on a par with that prevailing in 1934, a year of depression.

In this connection it is interesting to note that the overall profits of Ontario distributors in 1943, the first full year of subsidies showed a marked increase over those of 1942. There is in fact no evidence that the industry took any "squeeze" as the result of increased labour and other costs. Individual overall operating results, as well as for representative groups of concerns, all show a progressive improvement in earnings both in terms of dollars as well as percentagewise, from the time subsidies commenced up to the close of 1945 at least.

Subsidy payments are, of course, subject to the application of standard profits and taxes as determined under the provisions of the Dominion Excess Profits Tax Act so that where overpayments to individual concerns have occurred, recovery would be made by the Federal government if it has not already been effected. In this connection we should point out that based on the data furnished in the questionnaires, there would appear to be a number of assessments under appeal in respect of both the large and medium sized concerns.

The foregoing observations relate to the subsidy known as the "consumer" subsidy. That which was paid the producers and which at the same time served to protect the distributors' costs and supply of whole milk as well as the consumer price is another matter, which is more properly related to the operations of the producers. This subsidy was latterly the equivalent of 1½ cents per quart of fluid milk.

Diversification of Product and Effect on Earnings

Amongst the several hundred independent distributors of fluid milk in Ontario are eighty-five concerns (of which 45 are incorporated companies) who process and distribute ice cream, butter, cheese, etc., in addition to fluid milk, fluid cream, chocolate drink, and buttermilk, as do the three largest distributors.

Some of these 85 concerns, although regarded as distributors of fluid milk, would, in our opinion, be more properly classified as creameries or condensaries. Of the total, we have taken 55 as being fluid milk distributors.

Our tabulations indicate that the total sales of these 55 independent concerns engaging in combined operations amounted to $16,114,722 for the fiscal year next preceding October 1st, 1946, with net profits (before taxes) of $533,397, representing 3.31% thereof. In this regard the following table may be of interest:

TABLE 13

Statement of overall sales and net profits for the fiscal year next preceding October 1st, 1946 showing operating results of fluid milk distributors engaged in combined operations in relation to totals for industry

	Sales	% of total	Net Profits (before taxes)	% of total	% of Sales
55 Independents................	$16,114,722	18	$ 533,397	16	3.31
Three largest concerns...........	35,472,455	39	1,593,263	48	4.49
Totals for combined operations...	$51,587,177	57	$2,126,660	64	4.12
Regular fluid milk distributors not engaged in combined operations..................	38,412,823	43	1,167,340	36	3.04
Total for industry..............	$90,000,000	100	$3,294,000	100	3.66

The foregoing shows the improved rate of earnings resulting from diversified production. At the same time it affords an indication of the important contribution to industry sales and profits of the 58 separate organizations engaging in combined operations.

Productive Capacity

Our survey shows that in 1946, at least, the great majority of dairies were operating their fluid milk processing plants at full capacity the year round, on a single shift basis of 48 hours per week although sharp seasonal fluctuations were noted in a few instances principally amongst the smaller proprietory concerns operating in rural districts catering to summer trade.

Two instances came to our notice where the productive capacity on a single shift basis was considerably greater than the sales volume and in each case the concerns showed operating losses.

Generally speaking, however, the fluid milk processing plants themselves have a capacity which on a single shift basis of 48 hours per week is rather more than sufficient to take care of daily requirements, a margin being provided to enable processors to meet emergency situations resulting from delays in deliveries due to inclement weather conditions and peak periods of production.

Overall it would appear that the independent operators, at least, are fully equipped to process fluid milk at a rate per day of eight hours for six days per week—sufficient to ensure the prompt processing of whole milk delivery from the producer on the one hand, and adequate supplies of fluid milk to the consumer on the other.

Any appreciable contraction in the sale of fluid milk to consumers would, therefore, affect costs of production, since present fluid milk plant capacities are geared to an output of almost twice that of 1939.

Breakdown of Overall Sales and Net Profits (before taxes) for the Fiscal Year Next Preceding October 1st, 1946

So far as we are aware, a breakdown of the overall sales and net profits of the fluid milk distributive industry has not previously been attempted due to lack of statistical data, yet, having regard to the interdependence of one product on another where combined operations are engaged in, it seemed important that a condensed, yet comprehensive, statement be prepared.

We believe the information furnished in table 14 below affords a reasonably accurate indication of the relative importance of the products mentioned from the viewpoint of both sales volume and net profits for the fiscal year next preceding October 1st, 1946.

If similar data was assembled for future years, on a quarterly basis, those connected with the administration of the industry would be better informed regarding overall earnings and seasonal trends.

TABLE 14

Breakdown of overall sales and net profits (before taxes) by products for the fiscal year next preceding October 1st, 1946 (as estimated)

	Sales			Net Profits		
	Units	Amount	per Unit (cents)	Amount	%	per Unit (cents)
Fluid Milk	432,857,500 qts.	$53,284,758	12.31	$911,169	1.71	.21
Fluid Cream	12,366,900 qts.	5,441,436	44.00	326,486	6.00	2.64
Chocolate Drink	16,322,700 qts.	2,250,900	13.79	225,090	10.00	1.38
Ice Cream	5,600,000 gals.	6,552,000	117.00	982,800	15.00	17.55
Butter	20,000,000 lbs.	7,600,000	38.00	*(152,000)*	(2.00)	*(.76)*
Cheese	1,500,000 lbs.	300,000	20.00	10,500	3.50	.75
All other	—	14,570,906	—	989,955	6 80	—
		$90,000,000		$3,294,000	3.66	

The above table indicates that whereas for the fiscal period referred to, fluid milk sales approximated 60% of total volume, it contributed only 28% of overall profits, a lesser sum than ice cream sales which represented 7% of total, whereas the related profits equal 30% of overall earnings.

The items included under the heading "all other" comprise substantial amounts in respect of concentrated milk products and eggs, also lesser sums for poultry and frozen confections as well as revenues from storage rentals and the sale of ice.

Estimated Overall Net Profits for the year 1946

The estimates of overall net profits, before provision for Dominion income and excess profits taxes, which were received in response to our circular letter of December 7th, 1946, were compared with the actual earnings for the fiscal year next preceding October 1st, 1946, and some correspondence engaged in where there appeared to be unaccountable disparities. In certain cases the actual results for 1946 were obtained before completing our tabulation.

Our final figures, which were assembled by zones or milk sheds, led to the conclusion that the overall net profits of the industry from domestic sales for the year 1946, before provision for Dominion income and excess profits taxes would, in terms of dollars, closely approximate those of the previous fiscal year.

Outlook for 1947

As regards the current year, the present indications are that there may be a contraction in fluid milk sales and possibly other products which carry wider profit margins than fluid milk, but it is exceedingly difficult, if not impossible, to predict with any degree of accuracy, the extent to which the overall earnings of the industry may be influenced.

There is not only the matter of considering the extent of any fluctuation in the sales volume of each product, and gauging the effect of each on combined earnings, but also the extent to which costs might be influenced as a result of the volume variation, aside from possible increases or decreases in the costs of labour, operating supplies and expenses.

Counter to the foregoing are the increased earnings which may be expected from the recent increases in butter and cheese prices also the effect, over a twelve month period, of the recent increase in the consumer price of fluid milk.

Considering all aspects there seems a likelihood that the earnings of the industry for 1947 will at least approximate those of 1945 and 1946 which, as we have stated, were record years.

Income and excess profits taxation as applied to the industry

The tabulations include 118 incorporated companies in the fluid milk distributive industry including the three large concerns. With the exception of a few co-operative organizations, practically all of the remainder of the industry is composed of proprietory or partnership businesses.

The profits of the latter type of business are included in the personal income tax returns of the owners and only in a few instances is the amount of such tax disclosed in the financial statements relating to the business.

With regard to the three large concerns, calculations indicate that, for the year next preceding October 1st, 1946, they have, collectively, paid income and excess profits taxes to the extent of 58.5% of earnings, after taking into consideration the refundable portion. The combined net profits from operations in the Province of Ontario are stated at $1,593,263 on which income and excess profits taxes of approximately $932,059 would be provided for on the foregoing basis.

As regards the independent companies, their ratio of taxation to operating profits is less. For the fiscal year next preceding October 1st, 1946, their income and excess profits taxes are estimated at 49.3% of total earnings, after taking into consideration the refundable portion. The combined profits of the 115 independent incorporated companies are estimated at $850,000 on which income and excess profits taxes of approximately $419,050 would be provided for on the foregoing basis.

Thus, for 118 incorporated companies in the industry, including the three largest concerns, earnings of $2,443,263 are estimated in respect of the fiscal year next preceding October 1st, 1946, and on the above mentioned basis income and excess profits taxes would be $1,351,109, equal to 55.3% thereof.

The 1946 and 1947 Budgets of the Dominion Government provided for appreciable reductions in the scale of taxes. Allowing for these, and assuming that overall earnings will be maintained at about the same level, it is estimated that the total Dominion and Provincial profits taxes to be provided for in respect of 1947 operations of all incorporated companies in the industry, located in the Province of Ontario, will not exceed $1,058,161. This indicates an estimated saving of $292,948 as compared with the fiscal year next preceding October 1st, 1946.

Taking the entire fluid milk distributing industry of the Province, including proprietory and partnership businesses. it might well be that as a result of the net reductions in taxation applicable to 1946 and 1947, the industry may benefit to the extent of more than $400,000 in 1947 as compared with 1945.

Observations and conclusions

Financial position and overall operating results:

The investigation clearly shows that the financial position of the independent distributors, as well as the three largest concerns, has materially improved since 1939 as the result of increased sales volume and operating profits and the general financial policy followed by the majority of concerns of re-investing earnings in their business by improvements and additions to plant and equipment and improving the working capital position.

In 1939 fluid milk sales in the Province of Ontario were 250,405,000 quarts; in 1946 they were 467,736,000 quarts, an increase of 87%.

Our tabulations of questionnaires. combined with other data, indicate that the overall domestic dollar sales of the industry have doubled since 1939 and that the overall net profits (before taxes) from domestic sales have also doubled during the years 1939 to 1946 inclusive, each year showing a progressive improvement.

The scale of overall earnings in relation to both sales and capital employed can only be regarded as being satisfactory from the industry viewpoint.

As regards 1947, although conditions have changed since 1945 and 1946, there appears to be little ground for anticipating a contraction in overall earnings. Although the present indications are that fluid milk sales may not equal those of 1946, we have indicated that there are some important compensating factors.

Net profits from sales of fluid milk:

It appears that the profit margin on sales of fluid milk approximated .21 of one cent per quart during the fiscal year next preceding October 1st, 1946. We should, however, emphasize that such margin represents the average profit on *all* fluid milk sales, including sales to storekeepers, wholesalers, and others, which we have indicated were substantial and carried an overall average discount of 2 cents per quart during the period referred to.

Were all sales made at the regular consumer prices, the profit margin per quart for the fiscal period referred to would be increased by approximately one-half cent, less whatever the increased cost of selling and delivery expenses for retail deliveries might be, as compard with the cost of wholesale deliveries.

The proportion of wholesale sales to total volume and the discounts given on such sales are matters of extreme importance in the consideration of consumer prices. Yet, as we have stated, the authorities have presently no statistical data on either.

It could well be that a thorough investigation of wholesale sales on an industry wide basis would indicate that a reduction in the volume of so called "wholesale business" and the discounts of such sales could be effected resulting in an appreciable contribution to overall profits.

Reference should also be made to purchases of whole milk at secondary prices, an important factor from the producers' viewpoint, as well as that of the distributor and consumer.

On account of the substantial quantity involved it may have considerable bearing on the profit margins of fluid milk.

The foregoing relates to the period prior to October 1st, 1946. On this date the consumer price was advanced by 3 cents per quart, mainly to compensate the producers for loss of subsidy and to offset, to an extent, increased costs.

Official statistics show that the average overall price received by the distributors since October, 1946 has been 15.2 cents per quart and, of the increase of 3 cents, 2.63 cents goes to the producer to replace the producer subsidy of 55 cents per 100 lbs. and provide for an additional 45 cents per 100 lbs. to cover increased farm costs, the balance of .37 of one cent per quart being retained by the distributors.

Thus the distributors are now averaging a net profit (before taxes) of .58 of one cent per quart as compared with .21 of one cent being the net profit as reported for 1945 and 1946. They may in fact be averaging slightly more as the selling prices of pints and half pints were adjusted on October 1st, 1946 on the basis of four cents per quart in some areas.

This additional revenue may be offset to some extent by increased costs of processing and distribution over the 1946 level, but at the time of this report there is not sufficient data available on which to base an estimate for the industry as a whole.

Undoubtedly the profit margin on fluid milk sales will show considerable improvement in 1947 over the past.

Possible increases in sales revenues:

(a) As the result of the recent increases in the retail prices of cheese and butter, some benefit should accrue to the distributors in 1947.

So far as the distributive industry is concerned butter has made little, if any, contribution to overall profits in recent years. In some instances it appears to have been employed as a loss leader by certain distributors and if this condition were remedied, some improvement in earnings should result.

(b) The present spread between so-called wholesale prices and consumer prices might be narrowed and a closer control exercised on all sales made at less than the retail prices. Under existing conditions it could well be that the consumer is subsidizing the wholesale trade to some extent at least.

(c) Before adjustment of any prices, careful consideration should be given to probable effects on volume. In the fluid milk industry the importance of volume can hardly be over emphasized.

Possible Savings and Economies:

In a recent letter from Professor Spencer, of Cornell University, recognized authority on marketing of milk, he comments on every-other-day delivery as follows:

> "Practically everyone is very well pleased with the e.o.d. plan of operation. The milk companies have lower costs and more profit, the drivers get more pay for fewer hours of work, and the farmers' milk reaches the consumers at lower prices than would have to be charged if deliveries were made every day. So far as I know the e.o.d. plan of retail delivery still is practically universal in the United States."

(a) The matter of pooling delivery service has been the subject of considerable discussion from time to time, but there still seems to be variance of opinion regarding its practicability.

(b) Store deliveries, alternate daily deliveries, overlapping of routes, territorial limits as well as elimination of Sunday deliveries are also matters which should be given immediate consideration having regard to the savings that could be effected.

As regards store deliveries we have found that if conducted in conjunction with milk or dairy bar operations, satisfactory trading results are frequently attained, net revenues providing an appreciable contribution to overall earnings. Much depends of course on the location, sales volume by products, management, control, and other factors.

(c) It is estimated that the annual cost of vehicle operation for the industry, including depreciation, repairs, insurance and operating supplies, but excluding drivers' or salesmen's wages, approximates $5,000,000, representing about 5½% of total sales revenue or approximately .80 of one cent per quart.

Comparisons between different concerns of comparable size and type show marked contrasts in the matter of delivery expense and we hold the view that careful study of store and vehicle operations on a comprehensive basis would be productive.

Delivery costs are one of the most important factors in the ultimate cost to the consumer, yet the standard of the replies to our questionnaire showed room for much improvement in the matter of suitable records essential to proper control.

(d) The fluid milk distributive trade in the Province of Ontario requires the use of a great many vehicles, both automotive and of the horse-drawn type; it is estimated that in a normal year annual purchases exceed $1,200,000 per annum.

The collective purchasing of replacement equipment might be a practical and economical proposition, and is worth considering by the independents.

(e) Our survey disclosed that the majority of distributors are availing themselves of the maximum depreciation rates allowed under the Dominion income tax regulations. The application of these rates results in substantial charges against operations in addition to appreciable repair and maintenance costs and we are inclined to the view that, taking the industry as a whole the present rates may be higher than are actually warranted.

Records and Statistics:

It is our opinion that opportunities for the correction of uneconomic practices within the industry would reveal themselves were steps taken to improve the statistical and accounting standards of the industry.

The problem of obtaining accurate and informative data with reasonable promptitude from such a heterogeneous industry as the milk distributing trade is most difficult. This is amply borne out by the difficulties we ourselves encountered in obtaining financial statements and other data essential to the survey, and our endeavours to secure completion of the questionnaires.

It is apparent that the great majority of small and medium sized enterprises, as well as some of the larger concerns, do not maintain adequate statistical data; while their accounting standards and records leave much to be desired.

While recognizing these difficulties, we are of the opinion that, having regard to the public interest in such an essential food industry, it is most urgent that it be made fully aware of the advantages of maintaining adequate records, and indeed its obligation to do so, in order that those governmental authorities or persons who are charged with safeguarding the interests of the public and affiliated industries in such a vital food product are in possession of accurate and informative data both as to past experience and future trends.

We suggest that the entire problem be carefully studied and consultations held with all interested parties, including the related trades associations, with a view to deciding first upon the minimum requirements and then the "modus operandi".

It is also suggested that consideration be given as to the advisability of the Ontario Department of Agriculture (Statistics Branch) obtaining more complete information regarding the breakdown of the overall volume of the industry. For example, the provincial authorities are presently dependent on the Dominion Bureau of Statistics regarding sales volume of ice cream, yet this product is one of the most important factors in the overall profit position of the industry.

If, in the establishment of selling prices of fluid milk and cream, regard is to be given to the profits or losses relating to other products, the volume, prices and profit margins of such other products should be known to those provincial authorities responsible for the observance of fluid milk and cream regulations.

Purchases of whole milk at secondary prices and the products into which such milk is converted are important matters not only to the distributors but also to the producers and the consuming public. The statistical data presently available is in our opinion inadequate to ensure a proper degree of control on such a vital matter.

We should mention the desirability of the trade associations, the Milk Control Board, as well as the Department of Agriculture, reaching a clear understanding as to the proper classification of individual enterprises.

In connection with the survey we have required certain listings of individual concerns by category, i.e., fluid milk distributors, creameries, cheese factories, and condensaries. These lists revealed duplications, also apparently incorrect classifications; viz., creameries being listed as dairies and the reverse.

With combined operations, or diversified production, there may be some difficulty in effecting a proper classification under existing headings, but on account of the considerable spread in profit margins between the four groups, incorrect allocation can result in misleading conclusions. For instance, the inclusion of a number of creameries in a tabulation of dairies would result in the overall profit being understated under price ceilings that were in effect prior to April 30th, last. Conversely, the inclusion of dairy returns with those relating to creameries would result in the profit position of creameries being overstated.

We are not aware of the existence of any records regarding capacities of fluid milk plants by areas, which would serve to show the degree of balance between the producers of whole milk, the capacity of fluid milk plants, and the consumer demand, on a year round basis as well as for peak periods.

If the industry continues on the present basis of independent competition with local supply and demand factors more or less determining its policy, such statistical data would be of value to those responsible for protecting the public interest and public policy, and would be of value to the industry.

In the light of our experience, we believe that if any of the suggestions made in this report regarding the introduction of improved accounting standards and statistical data are adopted, the quickest and best results would be attained through initially arranging for personal visitations to a few selected concerns that would provide a representative cross-section of the industry, this to be followed up by the preparation of the requisite forms and instructions for the entire industry. Such procedure would, amongst other things, ensure elimination of superfluous matter and reduce the risks of misinterpretation.

These and many other points should, we believe, receive the most careful study in the interests of the industry itself, its affiliates, as well as that of the producers and the consuming public.

Export Sales:

The profits derived from export sales by the concern included in our tabulations were substantial, both in terms of dollars and on a percentage basis. As already mentioned, export sales and profits thereon have been excluded for the purposes of this report.

It should be noted that the producer receives considerably less for milk used for manufacturing purposes than for fluid sales whereas the manufacturer retains in full, any advantage which may exist between export selling prices and domestic. Consideration might, therefore, be given to adjustment of milk prices to the producer or alternatively a division made of the profit realized on export sales.

Amalgamations and Absorptions:

It is suggested that present procedures and regulations which may relate to, or have a bearing on, the amalgamation or absorption of fluid milk distributive businesses within the Province be reviewed with particular regard to their adequacy from the viewpoint of the public interest and that of the industry at large.

In the course of our survey we enquired into a few of the more recent absorptions and found that the ultimate objective of such transactions may not always be apparent. It would seem, therefore, that in such a vital and basic industry sufficiently comprehensive regulations are desirable.

Overall Operating Results
Three Large Concerns:

The report shows that the combined rate of earnings in relation to sales is considerably more than the rate applicable to the independent operators, whereas the return on capital employed, as computed substantially in accordance with the provisions of the Dominion excess profits tax act, is approximately the same.

As regards sales the three large concerns account for 39% of the estimated total for the whole Province, while their related earnings represent 48% of the total net profits.

It must, therefore, be granted that, combined, they constitute a dominant factor within the fluid milk distributive industry in the Province of Ontario.

This position has been attained over the years since 1928, largely by the acquisition of other businesses on terms which were no doubt attractive to both the purchasers and the vendors.

This report shows that, according to the latest available figures, the three large concerns combined placed a goodwill valuation on these acquisitions of $20,300,560 more than the depreciated or net book value of the tangible assets taken over.

Whether such sum was partially paid in cash or was mainly represented by the excess of the stated market value of the shares involved over the nominal or par value, or a combination of both, is immaterial from the viewpoint of this report. Neither is it of great importance whether such sum was recorded on the books or not, or since written off, (only $389,585 is presently reflected in the balance sheets). The fact remains that it reflects the purchasers assessment of the goodwill value of the businesses acquired as going concerns.

Having regard to the satisfactory rate of earnings of the three large companies and their strong overall financial position it is evident that the acquisitions of the various businesses as going concerns had considerable financial merit.

There is also the inference that for many years past the large operators have had a high degree of confidence in the potential earnings of the fluid milk distributive industry and its ability to provide a satisfactory return on both sales and capital employed under efficient management.

Increase in the Price of Fluid Milk
Authorized in October, 1946:

We are aware of the extent and nature of the negotiations and enquiries which were made by the Milk Control Board and the amount of data which was submitted to it before the increase of three cents per quart was authorized last October. There are, however, some points which have an important bearing on the matter, concerning which there seems a likelihood that the Board may not have had all pertinent data.

Firstly, there is the matter of wholesale sales. There were no official statistics showing the volume of milk sold at reduced prices to wholesalers, storekeepers, hospitals, etc., yet such sales in terms of quarts have just been found, by special investigation to represent 26.07% of the total for the year 1946 as compared with a lower estimate furnished by the Milk Control Board.

The discount on such sales ranges from one to four and one-half cents per quart and our calculations show that the total wholesale sales provide an average overall reduction from the consumer price of 2 cents per quart. This amount, in conjunction with the volume, has the effect of reducing the overall average selling price of all fluid milk sales by one-half cent per quart, thereby reducing the apparent profit margin.

Secondly, we would refer to the costs and profit margins by products which we have obtained in the course of our survey.

Wide disparities exist in the profit margins of almost every product, including fluid milk, not only between the different zones but also between individual concerns, operating in the same area, which can only be accounted for by one or more of the following factors:

1. Variations in the average selling price realized due to differing proportions of wholesale, store and other classes of business carrying discounts off the consumer price. For instance, if a concern specialized in wholesale trade to the exclusion of retail the selling price realized on fluid milk would average 2 cents per quart less than if engaged in exclusive retail trade.

2. Lack of uniformity in accounting practice and in particular the apportionment of overhead and indirect expenses.

As we have stated in the report few concerns maintain production cost records and those that do use different methods of applying overhead. Some use dollar sales, others unit quantities, material costs or some other basis.

3. Variations in the efficiency of manpower and machines, including delivery vehicles.

4. Variations in the degree of management and accounting standards and control affecting economy of operations.

5. Variations in interest charges due to differences in amount of borrowed capital.

6. Variations in proprietors' and partners' salaries or drawings. (In our survey this has been countered by the application of a pre-determined scale based on sales volume.)

The extent to which the foregoing were enquired into and considered before deciding to increase the consumer price by three cents per quart is not known, but their effect is clearly demonstrated by the following tabulations of the Royal Commission:

Cents per quart of fluid milk

	Cost	Selling price	Profit (before taxes)
Three largest concerns:			
(Average on all sales of fluid milk)......	12.6152	12.7067	.0915
	11.7500	12.0600	.3100
	11.9900	12.1500	.1600
Independents located in:			
Windsor............................	12.3310	12.6460	.3150
Windsor............................	(One of the three large concerns shows a cost of 12.3400 per quart and a profit of .3900 for the Windsor area)		
Toronto............................	10.9233	11.0373	.1140
Toronto............................	12.4590	12.8130	.3540

There are many other instances which could be cited but the foregoing demonstrates the point in question. It will be noted that the average selling prices for two companies located in Toronto differs by 1.7757 cents per quart and the profit of one is more than three times that of the other yet the cost per quart is 1.5357 cents higher. Marked contrasts also occur even amongst the three largest concerns. These differences may appear trifling on a unit basis but it should be remembered that on a volume of 400 million quarts per annum a tenth of a cent error results in a discrepancy of $400,000. Thus in such a volume business as the fluid milk industry the seemingly trifling sum reaches tremendous proportions. By the same token the smallest economy can have the most significant effect on earnings.

The third point we would refer to is the degree of diversification of product.

Our survey shows that, according to the information submitted by the industry, the return on fluid milk sales, for the fiscal year next preceding October 1st, 1946, was only 1.71% based on various combinations and tabulations made by us from the data in our possession.

It is not clear to us whether the price increase of October last was intended to make the fluid milk business self-supporting. If it was, then we are of the opinion that the price increase has achieved that objective.

However, it would seem that the industry has not operated on that basis in recent years at least. Information submitted leads to the conclusion that the trend has been toward the development and expansion of sales of other milk products, including ice cream, which undoubtedly carry more attractive profit margins.

Admittedly these indications largely relate to the war years, the survey covering the years from 1939 to 1947, and it may be that the industry considers such policy to be unsound in the post-war era and for the future.

As a result of the price increase the position of the several hundred smaller distributors throughout the Province who do not engage in diversified production on any scale will be considerably improved and the increase in so far as they are concerned may be justified. However, there are almost one hundred larger concerns operating principally in the metropolitan and urban centres throughout the Province which engage in diversified operations on an appreciable scale and whose overall earnings as a result were already attractive before the price increase was authorized.

The majority of these concerns have paid substantial excess profits taxes in recent years and their overall earnings are such that any price fixing body would have found it most difficult, if not impossible, to justify any further increase in revenues to such concerns as a group. The increase actually realized by the distributors according to their brief is .37 of one cent per quart of fluid milk which widens the spread between prime costs and selling prices by approximately $1,591,000 based on annual sales of 430,000,000 quarts.

Taking the distributive trade as a whole the increased dollar revenue would seem difficult to justify in its entirety if the earnings from other products are to be considered in determining the consumer price of fluid milk.

From our survey of producers' costs it would appear that the proportion of the three cent increase passed back to the producers, viz., 2.63 cents per quart was justified. This amount represents $1.00 per 100 lbs. of whole milk of which 55 cents served to replace the subsidy terminated at September 30th, 1946 and 45 cents to offset increased farm costs. Based on sales of 430 million quarts of fluid milk, wholemilk requirements would aggregate 1,109 million pounds which at 45 cents per 100 lbs. would amount to $4,990,500. This amount represents the maximum, as some allowance should be made in respect of secondary milk purchases.

To conclude our observations on the price increase of fluid milk in October last we give below a summarized statement showing what the effect would have been, as closely as can be projected, had the consumer price been advanced by 2½ cents per quart, to give a list price of 15½ cents instead of 16 cents (where applicable throughout the Province). In the statement we have assumed that profits from products other than fluid milk will approximate those of 1946. No allowance has been made for any increases in costs which may have occurred since the latter part of 1946.

TABLE 15

Projected statement of net profits (before taxes) for twelve month period allowing for sales of 430 million quarts of fluid milk on the basis of a 15½ cent consumer price

Estimated net profits from all products other than fluid milk	$ 2,382,831
Add:	
Estimated profit from fluid milk based on 430 million quarts at .21 of one cent per quart, as quoted in report, for 13 cent milk	903,000
Add:	$3,285,831
Estimated additional revenue from advance in consumer price of 2½ cents per quart, from 13 cents to 15½ cents 430,000,000 quarts @ 2.50 cents per quart (b)	10,750,000
Deduct:	$14,035,831
Amount to be passed back to producer 2.63 cents per quart equal to $1.00 per 100 lbs. of whole milk 430,000,000 quarts @ 2.63 cents per quart (a)	11,309,000
Adjusted net profits of distributive industry before provision for profits taxes	$ 2,726,831

It will be noted that the distributors, after paying the producers their increased price, would lose $559,000 (the excess of (a) over (b)) thereby reducing the profit on fluid milk from $903,000 to $344,000. This latter would then represent but .53 of one percent of sales equal to .08 of one cent per quart.

The adjusted net profit (before taxes) of $2,726,831 might still be considered as showing a satisfactory return in relation to both sales and capital employed.

In our opinion many concerns could well afford to reduce the present selling price of milk by one-half cent per quart while others might lose money and eventually be forced out of business unless there were other compensating factors such as the industry giving effect to economies recommended or outlined in this report and those embodied in the official report of the Royal Commission on Milk.

Respectfully submitted,

JOHN S. ENTWISTLE

Accountant, Royal Commission on Milk,
Province of Ontario.

July 26th, 1947.

EXHIBIT A

ROYAL COMMISSION ON MILK

INDEX OF COUNTIES COMPRISED IN EACH OF THE EIGHT ZONES, OR MILK SHEDS, SHOWING THE NUMBER AND TYPE OF INDEPENDENT FLUID MILK DISTRIBUTIVE BUSINESSES LOCATED IN EACH AND THE NUMBER AND TYPE FROM WHOM FINANCIAL STATEMENTS AND OTHER DATA WAS RECEIVED AND INCLUDED IN OUR SURVEY

	Distributors		Producer Distributors (Proprietory Businesses)		Financial statements from distributors included in tabulation		
	Incorporated Companies	Proprietory Businesses		Total	Incorporated Companies	Proprietory Businesses	Total
Zone 1							
Essex	3	9	1	13	2	10	12
Kent	1	10	4	15	1	6	7
Lambton	1	7	5	13	1	4	5
	5	26	10	41	4	20	24
Zone 2							
Brant	4	7	...	11	5	6	11
Elgin	2	3	2	7	4	3	7
Haldimand	2	3	9	14	...	...	...
Huron	...	17	4	21	...	8	8
Middlesex	5	13	11	29	4	9	13
Norfolk	1	7	2	10	1	6	7
Oxford	4	8	...	12	3	3	6
Perth	3	7	8	18	1	6	7
Waterloo	5	19	13	37	4	12	16
Wellington	2	14	6	22	...	13	13
	28	98	55	181	22	66	88
Zone 3							
Halton	...	10	...	10	...	6	6
Lincoln	4	7	6	17	5	7	12
Welland	4	11	5	20	4	9	13
Wentworth	8	9	2	19	8	6	14
	16	37	13	66	17	28	45
Zone 4							
Peel	1	8	2	11	...	4	4
York	26	29	2	57	26	22	48
	27	37	4	68	26	26	52

Zone 5							
Bruce	1	12	6	19	1	6	7
Dufferin	...	4	...	4	1	2	3
Durham	...	6	3	9	...	3	3
Grey	2	9	7	18	2	4	6
Haliburton	...	2	2	4	...	4	4
Muskoka	1	7	6	14	...	4	4
Northumberland	1	7	3	11	1	4	5
Ontario	3	10	2	15	3	7	10
Peterborough	1	8	5	14	1	3	4
Simcoe	4	23	5	32	1	12	13
Victoria	...	7	12	19	...	5	5
	13	95	51	159	10	54	64
Zone 6							
Algoma	...	8	5	13	1	5	6
Cochrane	2	7	6	15	2	4	6
Kenora	1	6	1	8	2	2	4
Manitoulin	1	2	...	3	1	...	1
Nipissing	2	3	2	7	1	1	2
Parry Sound	1	3	3	7	1	4	5
Rainy River	...	3	2	5	...	1	1
Sudbury	4	12	11	27	3	5	8
Temiskaming	...	10	...	10	1	6	7
Thunder Bay	2	7	6	15	3	3	6
	13	61	36	110	15	31	46
Zone 7							
Carleton	6	11	43	60	4	4	8
Lanark	2	9	2	13	2	6	8
Prescott	...	7	6	13	...	...	...
Renfrew	1	12	4	17	1	2	3
Russell	...	2	10	12	...	1	1
	9	41	65	115	7	13	20

EXHIBIT A

ROYAL COMMISSION ON MILK

INDEX OF COUNTIES COMPRISED IN EACH OF THE EIGHT ZONES, OR MILK SHEDS, SHOWING THE NUMBER AND TYPE OF INDEPENDENT FLUID MILK DISTRIBUTIVE BUSINESSES LOCATED IN EACH AND THE NUMBER AND TYPE FROM WHOM FINANCIAL STATEMENTS AND OTHER DATA WAS RECEIVED AND INCLUDED IN OUR SURVEY

	Distributors		Producer Distributors		Financial statements from distributors included in tabulation		
	Incorporated Companies	Proprietory Businesses	(Proprietory Businesses)	Total.	Incorporated Companies	Proprietory Businesses	Total
Zone 8							
Dundas	...	4	2	6	...	3	3
Frontenac	1	11	3	15	1	9	10
Glengarry	...	1	9	10	...	2	2
Grenville	1	6	2	9	...	4	4
Hastings	...	17	3	20	...	15	15
Leeds	...	10	3	13	1	4	5
Lennox and Addington	...	4	4	8	...	2	2
Prince Edward	...	4	6	10	...	2	2
Stormont	2	3	11	16	2	3	5
	4	60	43	107	4	44	48
		RECAPITULATION					
Zone 1	5	26	10	41	4	20	24
Zone 2	28	98	55	181	22	66	88
Zone 3	16	37	13	66	17	28	45
Zone 4	27	37	4	68	26	26	52
Zone 5	13	95	51	159	10	54	64
Zone 6	13	61	36	110	15	31	46
Zone 7	9	41	65	115	7	13	20
Zone 8	4	60	43	107	4	44	48
Total	115	455	277	847	105	282	387

EXHIBIT B

ROYAL COMMISSION ON MILK

RECAPITULATION BY ZONES OF DATA EXTRACTED FROM FINANCIAL STATEMENTS SUBMITTED BY 387 INDEPENDENT FLUID MILK DISTRIBUTORS

Zone	Concerns Tabulated	Overall Net Profit (Before Taxes)	Total Sales Amount	% Profit	Capital Employed Amount	% Profit
1.	24	$143,387	$3,937,197	3.64	$836,995	17.13
2.	88	161,835	6,377,599	2.54	1,160,950	13.94
3.	45	286,746	7,022,851	4.08	1,359,538	21.09
Total West	157	$591,968	$17,337,647	3.41	$3,357,483	17.75
4.	52	$160,961	$11,763,560	1.37	$1,204,077	13.37
5.	64	155,824	3,747,792	4.16	868,270	17.95
6.	46	264,616	6,309,879	4.19	1,261,462	20.98
Total Central	162	$581,401	$21,821,231	2.66	$3,333,809	17.44
7.	20	$43,700	$2,878,143	1.52	$529,340	8.26
8.	48	167,118	3,773,379	4.43	656,843	25.44
Total East	68	$210,818	$6,651,522	3.17	$1,186,183	17.77
Total	387	$1,384,187	$45,810,400	3.02	$7,877,475	17.57

ROYAL COMMISSION ON MILK

EXHIBIT C

TABULATION BY ZONES OF SALES GROUPINGS OF 387 INDEPENDENT FLUID MILK DISTRIBUTORS

Zone	Group 1. up to $20,000	Group 2. $20,000 to $50,000	Group 3. $50,000 to $100,000	Group 4. $100,000 to $200,000	Group 5. $200,000 to $500,000	Group 6. Over $500,000	Total
1.	$78,916	$133,999	$212,622	$690,692	$833,415	$1,987,553	$3,937,197
2.	274,616	931,918	1,463,882	1,968,240	1,738,943	....	6,377,599
3.	78,060	345,124	620,444	1,814,995	1,696,981	2,467,247	7,022,851
Total West	$431,592	$1,411,041	$2,296,948	$4,473,927	$4,269,339	$4,454,800	$17,337,647
4.	$....	$422,203	$891,818	$1,864,878	$3,186,155	$5,398,506	$11,763,560
5.	170,522	832,529	1,184,111	899,222	661,408	....	3,747,792
6.	107,951	492,442	633,910	1,268,966	1,845,150	1,961,460	6,309,879
Total Central	$278,473	$1,747,174	$2,709,839	$4,033,066	$5,692,713	$7,359,966	$21,821,231
7.	$48,126	$319,776	$172,685	$561,048	$....	$1,776,508	$2,878,143
8.	183,121	444,133	519,030	702,011	1,380,798	544,286	3,773,379
Total East	$231,247	$763,909	$691,715	$1,263,059	$1,380,798	$2,320,794	$6,651,522
Total	$941,312	$3,922,124	$5,698,502	$9,770,052	$11,342,850	$14,135,560	$45,810,400
Average Sales per group	$14,482	$33,238	$72,133	$141,595	$290,842	$831,504	$118,373
Net Profits	$49,867	$108,830	$116,733	$253,572	$333,047	$522,138	$1,384,187
% of Sales	5.30	2.77	2.05	2.60	2.94	3.69	3.02
% of Total	3.60	7.86	8.43	18.32	24.06	37.73	100.00

EXHIBIT D

ROYAL COMMISSION ON MILK

TABULATION BY ZONES SHOWING THE MATERIALS, PROCESSING, DISTRIBUTING, AND ADMINISTRATIVE COSTS OF 41 REPRESENTATIVE INDEPENDENT FLUID MILK DISTRIBUTORS

Zone	Sales	Raw Materials	% of Sales	Processing	% of Sales	Selling and Delivery	% of Sales	General and Administration	% of Sales	Total Cost	% of Sales	Net Profits	% of Sales
1..........	$1,146,727	$702,587	61.27	$145,237	12.67	$194,309	16.94	$66,355	5.78	$1,108,488	96.66	$38,239	3.34
2..........	773,745	490,014	63.33	101,734	13.15	129,830	16.78	31,824	4.11	753,402	97.37	20,343	2.63
3..........	910,655	533,686	58.60	128,075	14.06	163,171	17.92	44,873	4.93	869,805	95.51	40,850	4.49
Western Ontario.......	$2,831,127	$1,726,287	60.98	$375,046	13.25	$487,310	17.21	$143,052	5.05	$2,731,695	96.49	$99,432	3.51
4..........	$3,229,444	$1,993,226	61.72	$384,538	11.90	$647,728	20.06	$146,784	4.55	$3,172,276	98.23	$57,168	1.77
5..........	824,665	497,459	60.32	118,659	14.39	117,950	14.30	56,320	6.83	790,388	95.84	34,277	4.16
6..........	1,471,164	932,991	63.42	186,452	12.67	203,682	13.84	80,707	5.49	1,403,832	95.42	67,332	4.58
Central & Northern Ontario.......	$5,525,273	$3,423,676	61.96	$689,649	12.48	$969,360	17.54	$283,811	5.15	$5,366,496	97.13	$158,777	2.87
7..........	$1,317,233	$841,987	63.92	$144,917	11.00	$246,382	18.70	$59,033	4.49	$1,292,319	98.11	$24,914	1.89
8..........	1,065,184	615,528	57.79	165,666	15.55	167,907	15.76	69,351	6.51	1,018,452	95.61	46,732	4.39
Eastern Ontario.......	$2,382,417	$1,457,515	61.18	$310,583	13.04	$414,289	17.39	$128,384	5.38	$2,310,771	96.99	$71,646	3.01
Total.........	$10,738,817	$6,607,478	61.53	$1,375,278	12.81	$1,870,959	17.42	$555,247	5.17	$10,408,962	96.93	$329,855	3.07

ROYAL COMMISSION ON MILK

EXHIBIT E

TABULATION BY ZONES SHOWING THE MATERIAL LABOUR AND FACILITIES COSTS OF 41 REPRESENTATIVE INDEPENDENT FLUID MILK DISTRIBUTORS

Zone	Sales	Materials and Packaging	% of Sales	Wages Processing	% of Sales	Wages Commissions Selling Delivery	% of Sales	Salaries General Adminis- trative	% of Sales	Total Wages	% of Sales
1.	$1,146,727	$722,606	63.02	$65,484	5.71	$128,601	11.20	$47,333	4.13	$241,418	21.04
2.	773,745	507,471	65.59	44,835	5.79	83,659	10.81	21,603	2.79	150,097	19.39
3.	910,655	546,048	59.96	53,622	5.89	117,147	12.86	27,113	2.98	197,882	21.73
Western Ontario	$2,831,127	$1,776,125	62.74	$163,941	5.79	$329,407	11.64	$96,049	3.39	$589,397	20.82
4.	$3,229,444	$2,092,943	64.82	$150,866	4.67	$442,704	13.71	$82,178	2.54	$675,748	20.92
5.	824,665	509,090	61.73	43,988	5.34	77,388	9.38	40,414	4.90	161,790	19.62
6.	1,471,164	961,117	65.33	73,218	4.98	132,982	9.04	47,611	3.23	253,811	17.25
Central and Northern Ontario	$5,525,273	$3,563,150	64.49	$268,072	4.85	$653,074	11.82	$170,203	3.08	$1,091,349	19.75
7.	$1,317,233	$868,152	65.91	$74,267	5.64	$161,417	12.25	$35,042	2.66	$270,726	20.55
8	1,065,184	627,629	58.92	82,089	7.71	107,966	10.14	49,290	4.62	239,345	22.47
Eastern Ontario	$2,382,417	$1,495,781	62.78	$156,356	6.56	$269,383	11.31	$84,332	3.54	$510,071	21.41
Total	$10,738,817	$6,835,056	63.65	$588,369	5.48	$1,251,864	11.66	$350,584	3.26	$2,190,817	20.40

EXHIBIT E (*Cont'd*)

TABULATION BY ZONES SHOWING THE MATERIAL LABOUR AND FACILITIES COSTS OF 41 REPRESENTATIVE INDEPENDENT FLUID MILK DISTRIBUTORS

Zone	Repairs and Maintenance	% of Sales	Depreciation Provision	% of Sales	Other Expenses	% of Sales	Total Services Cost	% of Sales	Total Cost	% of Sales	Net Profits	% of Sales
1	$27,785	2.42	$20,027	1.75	$96,652	8.43	$144,464	12.60	$1,108,488	96.66	$38,239	3.34
2	15,526	2.01	14,169	1.83	66,139	8.55	95,834	12.39	753,402	97.37	20,343	2.63
3	15,496	1.70	16,992	1.87	93,387	10.25	125,875	13.82	869,805	95.51	40,850	4.49
Western Ontario	$58,807	2.08	$51,188	1.81	$256,178	9.05	$366,173	12.93	$2,731,695	96.49	$99,432	3.51
4	$57,230	1.77	$71,516	2.21	$274,839	8.51	$403,585	12.49	$3,172,276	98.23	$57,168	1.77
5	24,125	2.92	23,309	2.83	72,074	8.74	119,508	14.49	790,388	95.84	34,277	4.16
6	34,953	2.38	27,450	1.87	126,501	8.60	188,904	12.84	1,403,832	95.42	67,332	4.58
Central and Northern Ontario	$116,308	2.11	$122,275	2.21	$473,414	8.57	$711,997	12.89	$5,366,496	97.13	$158,777	2.87
7	$16,815	1.28	$18,567	1.41	$118,059	8.96	$153,441	11.65	$1,292,319	98.11	$24,914	1.89
8	14,427	1.35	27,080	2.54	109,971	10.33	151,478	14.22	1,018,452	95.61	46,732	4.39
Eastern Ontario	$31,242	1.31	$45,647	1.92	$228,030	9.57	$304,919	12.80	$2,310,771	96.99	$71,646	3.01
Total	$206,357	1.92	$219,110	2.04	$957,622	8.92	$1,383,089	12.88	$10,408,962	96.93	$329,855	3.07

APPENDIX 19

SUMMARY
COMPARISON OF FLUID MILK SALES IN RESPECT TO HOUSEHOLDERS, STORES AND JOBBERS

	Householders	%	Stores	%	Jobbers	%	Totals
Toronto	37,001,473	70.0	14,411,989	27.3	1,366,785	2.7	52,780,247
Hamilton	8,236,446	79.2	2,065,406	19.8	106,226	1.0	10,408,078
London	4,116,861	76.5	1,045,078	19.4	219,517	4.1	5,381,456
Ottawa	7,664,223	67.3	3,291,704	28.9	424,981	3.8	11,380,908
All Others	70,908,083	75.9	19,986,480	21.5	2.416,580	2.6	93,311,143
Provincial Totals	127,927,086	73.9	40,800,657	23.6	4,534,089	2.5	173,261,832

THE ABOVE COMPARATIVE REPORT COVERS FLUID MILK SALES IN THE PROVINCE OF ONTARIO
FOR THE MONTHS OF
JANUARY, MARCH, JULY, SEPTEMBER AND DECEMBER 1946;
WITH THE EXCEPTION OF MANY CARDS WHICH HAD TO BE REJECTED.

APPENDIX 20

RECORD OF LICENSES IN THE MARKETS OF TORONTO, HAMILTON, WINDSOR, OTTAWA, KIRKLAND LAKE, TIMMINS

and comments thereon

TORONTO

This record will differ from that shown in Mr. Houck's brief and from the record given when you were in the office on January 30th. This record covers the entire Toronto area, which is described on the record, whereas the former record was for the area prior to the inclusion of Port Credit and Cooksville.

A number of dairies are shown as being "taken over by" other dairies. While our files do not give reasons or particulars we know from our personal knowledge that in the majority of cases the dairies were in financial difficulties. The same may be said of the term "amalgamated"—no doubt, in most cases there was a sale of some kind made.

The dairies which disappeared were small or medium sized businesses, except Caulfields. The dairies which took others over were small or medium sized, except Silverwood Dairies Limited, which took over two.

There is no indication of any movement toward a monopoly situation here by large chain dairies.

HAMILTON

There were three chain dairies—Bordens, Silverwoods and Eastern until the year 1940 when Acme Farmers (Eastern) sold to Silverwoods. Silverwoods also acquired during the years two other small businesses and Bordens, one.

The other changes were between small dairies.

WINDSOR

This market has two chain dairies—Bordens and Silverwoods and in the twelve years of control, no dairies were taken over by these two chains.

Purity Dairy is a large independent organization and took over one small dairy.

OTTAWA

This market is peculiar for the number of producer-distributors who have operated over the years. The explanation for this situation is, that because of the chaotic conditions that prevailed in the early thirties, a number of farmers living close to the City, decided to sell direct to consumers in order to improve their financial returns and in a number of cases gave employment to members of their families who returned to the home farm on losing their jobs in industry.

It will be noted that with the stability of prices, as the result of control, a number of producer-distributors discontinued the retailing of their business and confined their business to production only. The labor difficulties on the farms during the war also resulted in a number discontinuing, specially in 1941, 1942 and 1943.

The two large chain dairies—Bordens and Producers (Dominion) have not, according to this record, made any particular drive to take over other dairies—none of the larger plants—Bordens, Producers, Clark's and Central—have been particularly active in absorbing the smaller dairies—be they producer-distributor or distributor.

TIMMINS

This market has never been burdened with a lot of distributors. I think the main reason for this is that the distributors have always worked on a comparatively narrow margin. For years the price to the producer was $3.24 per hundred pounds on a selling price of 14c per quart to the consumer. This is a fairly narrow spread for a northern town.

A large chain organization, Palm Dairies, operated in the market for a few years but were unable to operate at any profit and decided to withdraw from business. A co-operative organization, both consumer and producer, also found difficulty in operating under the spread allowed and finally, because of financial difficulties, sold out to Northland Producers Dairy, who within two years found themseves in a similar position and had to sell.

The Board was requested to increase the spread allowed distributors but in view of very efficient operation and favourable profit position of the largest dairy in Timmins, could not justify any increase in operating spreads.

KIRKLAND LAKE

The history of this market is somewhat similar to that of Timmins, except that the distributors here always had a wider operating spread than Timmins; even under this wide spread the Palm Dairies could not make any profit and sold out.

Another organization, Eplett & Sons, who are in the Ice Cream business in the north in a fairly large way, could not make any money in the fluid end of its business and decided to sell out.

MILK DISTRIBUTOR LICENSES—TORONTO MARKET
and comments

Year	Number Licenses Issued	Number Licenses Discontinued	Comments	Number Additional Licenses	Comments
1934	96				
1935	89	8	Oakwood Diary taken over by Harris Dairy	1	New D
			Brown Dairy taken over by Fairbank Dairy		
			Dockerary Dairy taken over by Halls		
			Cooper Dairy taken over by Lakeview Dairy		
			Marwallow Dairy taken over by Danforth Dairies		
			Consumers Ltd. taken over by White Oak Dairy		
			Bankrupt—Monarch Dairy		
			Out of Business—R. W. Smith, Primrose Farm Dairy		
1936	86	3	Thos. Downing taken over by Reid-Ford Dairy		
			Bailiff's Sale—Wm. B. Mason		
			No license required—Devon Dairy Ltd.		
1937	83	4	Tingles Dairy taken over by Highland Dairy	1	New PD
			Amalgamated—Glendale & Fairbank (Fairglen)		
			Out of Business—W. A. Brownlee		
			Out of Business—L. Robinson		
1938	80	4	Glenholm Dairy taken over by Hastings	1	New D
			Bankrupt—Creme-Crest Dairy		
			Financial Difficulties—Dominion Dairy		
			Financial Difficultes—Claremont Dairy		
1939	78	2	M. Boyd, Silvercrest Dairy taken over by W. C. Prouse		
			Out of Business—Model Dairy		
1940	77	2	Amalgamated—Eglinton & Kingsdale (Kingsdale)	1	New D Cream Only
			No license required—Hunts'		
1941	74	3	Kingdon Bros., taken over by Weston Dairy		
			Morrison Dairy taken over by Hillside Dairy		
			Ravenswood Dairy taken over by Blantyre Dairy		
1942	63	11	Brittain Dairy taken over by Rutherford Dairy		
			Marr's Dairy taken over by Silverwoods		
			F. M. Robinson taken over by Blantyre		
			Peoples Dairy taken over by Halls		
			A. Cryderman taken over by Fairglen		
			R. J. Woolley taken over by Ford's		

MILK DISTRIBUTOR LICENSES—TORONTO MARKET
and comments

Year	Number Licenses Issued	Number Licenses Discontinued	Comments	Number Additional Licenses	Comments
1942—con.			Fernbank taken over by Briar Hill		
			Kipling Farms taken over by Silverwoods		
			(PD). . Gerald Phillips taken over by Cooksville Jersey Dairy Ltd.		
			Out of Business—Myhill & Ramsden		
			Ford's Dairy taken over by Fairglen		
1943	58	5	Amalgamated—Caulfields Dairy, Unit of Bordens, and City Dairy, Unit of Bordens (The Borden Company Ltd.)		
			Vita Milk Dairy taken over by Canada Dairies		
			Kingsdale Dairy taken over by Fairglen		
			Bell Bros. taken over by Donlands		
			Financial Difficulties—Harris Dairy		
1944	57	1	P. Aguis reverted from producer-distributor to peddler		
1945	56	1	Hillside Dairy taken over by Silverwoods		
1946	53	3	Empire Dairy taken over by Walnut		
			York Dairy taken over by Donlands		
			Amalgamation—Jersey Cream Products with Manor Park Dairy		

Note:—All "D" license holders in above list—if not, type specified.

Definition:

Toronto Milk Marketing Area

(1) The City of Toronto.
(2) The municipalities of East York Township, Leaside, York Township, Weston, Swansea, Mimico, New Toronto, Long Branch, Scarboro Township, Port Credit, Forest Hill Village.
(3) Those parts of Toronto Township, south of the Britannia Side Road,
(4) Those parts of the Township of Etobicoke located south of Wilson Avenue or its extension,
(5) The Township of North York with the exception of the northeast part, which part is bounded on the south by Wilson Avenue and on the east by Keele Street.

MILK DISTRIBUTOR LICENSES—HAMILTON MARKET
and comments

Year	Number Licenses Issued	Number Licenses Discontinued	Comments	Number Additional Licenses	Comments
1934	35				
1935	40			5	2 new PD 3 new D
1936	40	2	Purity Farms Dairy taken over by Woodhalls Dairy Out of Business—A.M. Shaver	2	1 new PD 1 new D Cream only
1937	38	2	Out of Business—J. C. Attridge License not issued—C. D. Yanch & L. Davis' License cancelled by Civic Health Authorities—no Milk Control Board license issued.		
1938	36	2	Out of Business—O. E. Baillie Out of Business—Robt. Patterson		
1939	35	1	Maple Leaf Dairy taken over by Prospect Dairy		
1940	35	2	Acme Farmers Dairy taken over by Silverwoods Dairies Ltd. J. Thompson taken over by Stoney Creek Dairy	2	2 new PD
1941	35		No changes		
1942	32	3	Amalgamated—East End Dairy and Prospect Dairy (Prospect) Avondale Dairy taken over by Westdale Dairy R. Veevers taken over by Silverwood Dairies Ltd.		
1943	31	1	Brookfields Dairy taken over by the Borden Company		
1944	30	1	Westdale Dairy taken over by Silverwood Dairies Ltd		
1945	26	4	Carters Dairy taken over by Woodhalls Dairy Woodley Dairy taken over by Springbank Dairy J. C. Eaton taken over by E. F. Newman Out of Business—S. H. Hill, Clappison's Dairy		
1946	25	1	A. M. London taken over by E. F. Newman		

Definition: *Hamilton Milk Marketing Area*

(a) The City of Hamilton; (b) The Town of Burlington; (c) The Town of Dundas; (d) The Town of Oakville; (e) The Village of Bronte; (f) The Village of Ancaster; (g) The Village of Waterdown; (h) Burlington Beach; (i) Townships of—Ancaster, Barton and Saltfleet; (j) Those parts of the townships of West Flamboro, East Flamboro and Nelson south of one concession, north of No. 5 Highway, and (k) Those parts of the township of Trafalgar, south of one concession north of No. 5 Highway; (l) Number 1, Wireless School, Mount Hope, R.C.A.F; (m) Those parts of the township of Glanford included in the 1st, 2nd, and 3rd concessions thereof.

MILK DISTRIBUTOR LICENSES—WINDSOR MARKET

and comments

Year	Number Licenses Issued	Number Licenses Discontinued	Comments	Number Additional Licenses	Comments
1934	12				
1935	13			1	New D
1936	12	1	Amalgamated—Ballantyne Windsor City Dairy and Walkerside Dairy (The Borden Co., Ltd.)		
1937	13			1	New PD
1938	14	1	Amalgamated—East Windsor and A. Renaud (Peoples)	2	1 PD Cream Only 1 D Cream Only
1939	13	2	Amalgamated—Countryside Qualities & Peerless Dairy (Peerless Countryside Dairies Ltd.) Financial Difficulties—Maple Grove and taken over by Border Cities	1	PD Cream Only
1940	14			1	PD Cream Only
1941	14		No changes		
1942	12	2	Leo Drouillard taken over by Purity Dairies Out of Business—J. Cherkinsky		
1943	12		No changes		
1944	10	2	Peoples Dairy taken over by Peerless Countryside Dairies Ltd. Out of Business—H. L. Wilson (Deceased)		
1945	8	2	Out of Business—Srigley & Son Out of Business—Henry Steckle		

Definition:

Windsor Milk Marketing Area

Sale of milk and cream for fluid consumption in the Border Cities including the municipalities of LaSalle, Ojibwa, Sandwich, Windsor, Walkerville, East Windsor, Riverside and Tecumseh.

MILK DISTRIBUTOR LICENSES—OTTAWA MARKET

Year	Licenses Issued				Licenses Discontinued					Additional Licenses:				
	D	PD	Ped	Total	D	PD	Ped	Total	Comments:	D	PD	Ped	Total	Comments:
1934	25	37	2	64										
1935	27	45	3	75						2	8	1	(11)	New licenses
1936	26	42	5	73	1	5	—	(6)	1 D changed to peddler 1 PD changed to peddler Out of Business-3 Cancelled-J. C. Kelly (Civic authorities cancelled license)	—	2	2	(4)	D changed to Ped PD changed to Ped
1937	24	45	4	73	2	2	1	(5)	2 D changed to PD 1 out of Business 1 License not required 1 Cancelled-Noel Renaud and Son (Civic authorities cancelled license)	—	5	—	(5)	1 new license 2 changed from D to PD 2 cream only to PD
1938	23	43	3	69	1	6	1	(8)	5 Out of Business 2 Sold (H. W. Pettapiece taken over by Regal Dairy, and J. Button taken over by J. C. Bradley) 1 D changed to PD	— —	3 1	— —	(4) —	3 new licenses 1 D changed to PD

MILK DISTRIBUTOR LICENSES—OTTAWA MARKET

Year	Licenses Issued				Licenses Discontinued					Additional Licenses:				
	D	PD	Ped	Total	D	PD	Ped	Total	Comments:	D	PD	Ped	Total	Comments:
1939	21	40	2	63	2	4	1	(7)	1 Financial Difficulties-Lemay Bros. (d)	—	1	—	(1)	1 ped. changed to PD
1940	19	41	—	60	2	—	2	(4)	1 Financial Difficulties-Canadian Dairy Ltd. (d) 1 Refused-W. D. Ogilvie (Civic authorities refused license). 3 Out of Business. 1 changed from peddler to producer-distributor 1 Financial Difficulties-Westboro Dairy Ltd. (d) 1 Sold-J. C. Bradley taken over by Producers Dairy. (d) 2 Peddlers-N. Gooding taken over by Clark Dairy Ltd.	—	1	—	(1)	1 new PD
1941	18	42	1	61	1	1	—	(2)	Regal Dairy taken over by Mrs. Harris. 1 Out of Business. 1 D changed to Peddler.	—	2	1	(3)	
1942	18	32	—	51	1	10	1	(12)	9 PD's sold-Geo. Otterson taken over by Producers Dairy A. C. Scharfe taken over by C. Lillico C. R. Munro taken over by Valley Co-op. E. H. Honeywell taken over by Producers R. H. Ramsay taken over by Clark Dairy. R. M. Lillico taken over by Producers. D. A. Ireland taken over by Central Dairies W. Cosgrave taken over by Mutual Dairies. H. Switzer taken over by C. Lillico.	—	—	—	(2)	1 ped. to distrib. 1 pd to distrib.

MILK DISTRIBUTORS LICENSES—OTTAWA MARKET

Year	Licenses Issued				Licenses Discontinued				Comments:	Additional Licenses:				
	D	PD	Ped	Total	D	PD	Ped	Total		D	PD	Ped	Total	Comments:
1942	Cont'd								1 D sold-H. Knox & Sons taken over by Valley Co-op. 1 Ped changed to distributor. 1 PD changed to distributor.					
1943	17	27	—	44	1	7	—	(8)	4 PD's sold-J. W. Alexander taken over by Valley Co-op. T. McNeeley & Sons taken over by Valley Co-op Ed. Piecki taken over by Ottawa Dairy. Robt. Stewart taken over by Valley Co-op. 1 D sold-T. B. Boyce taken over by Producers Dairy. 2 Out of Business. 1 Discontinued.	—	—	—	(1)	1 new PD license
1944	17	24	—	41	—	3	—	(3)	2 Out of Business 1 PD sold-Hills & Sons taken over by Mutual Dairies.					
1945	17	20	—	37	—	4	—	(4)	Out of Business—4					
1946	16	18	—	34	1	2	—	(3)	1 PD sold-Mrs. C. Delaney taken over by Producers Dairy. 1 D sold-Pit Plouffe taken over by Mongeon Bros. 1 Out of Business.					

Ottawa Milk Marketing Area

Definition:

(a) The City of Ottawa; (b) The town of Eastview; (c) That part of March Township within the following described Boundaries: "Commencing at a point on the Ottawa River, thence running in a south-westerly direction along the Road between concessions 15 and 16 to a point joining Provincial Highway No. 17, thence in a south-easterly direction along the said Highway No. 17 to the easterly boundary of the said March Township; thence in a north-westerly direction along the East boundary of the said March Township to a point on the Creek running into Shirley Bay; thence along said Creek to Shirley Bay; and thence along Shirley Bay and the Ottawa River to the aforementioned starting point," and (d) That part of Nepean Township bound on the north by the Ottawa River; on the west by the westerly boundary of the said Nepean Township to a point joining the Base Line; thence along the Base Line to a point joining the line between concessions 1 and 2; thence along the line between concessions 1 and 2 in a southerly direction to a point joining the Rideau River at the Jock Bridge; and on the east by the Rideau River; and (e) That part of Gloucester Township bound by the Ottawa River on the north, the Rideau River on the west and on the south by the Road between lots 15 and 16; and on the east by the Road between lots 15 and 16 through Blackburn Station to the Ottawa River, and (f) The Village of Rockcliffe Park.

CREAM ONLY MILK DISTRIBUTOR LICENSES—OTTAWA MARKET
and comments on those who have discontinued

Year	Total Licenses Issued	Total Licenses Discontinued	Total Additional Licenses	Comments
1934	60			
1935	93		33	
1936	95	9	11	Out of Business— 9
1937	84	11	....	Out of Business 9 Granted extension to cover milk as well as cream—transferred to regular license holders—2
1938	70	14		Out of Business—14
1939	49	22	1	Out of Business—22
1940	43	6	....	Out of Business— 5 Refused—1—City Health authorities cancelled local license—M.C.B. refused issuance because dairy did not comply with local requirements.
1941	40	3	....	Out of Business—3
1942	36	4	....	Out of Business—4
1943	30	6	....	Out of Business—6
1944	26	4	....	Out of Business—4
1945	22	4	....	Out of Business—4
1946	21	1	....	Out of Business—1

Note—Out of Business—(reasons) selling on market only; selling directly to dairy; No cream—only license holder sold out to an existing dairy—if so, no knowledge; All cream only license holders were licensed as "PD".

MILK DISTRIBUTOR LICENSES—TIMMINS MARKET

Year	Licenses Issued			Licenses Discontinued			Comments	Additional Licenses		
	D	PD	Total	D	PD	Total		D	PD	Total
1934	1		1							
1935	2	3	5					1	3	(4) new licenses
1936	3	3	6					1		new
1937	4	2	6				1 PD changed to D			
1938	4	2	6							
1939	4	2	6							
1940	4	..	4		2		Out of Business—D. Nora; Korman's Dairy took over Peter Sadino.			
1941	3	..	3	1			Palm Dairies & Workers Co-Operative of New Ontario taken over by producers operating under Northland Producers Dairy.			
1942	3	..	3							
1943	2	..	2				Korman's Dairy took over Northland Producers Dairy (under Bulk Sales Act)			
1944	2	..	2							
1945	2	..	2							
1946	2	..	2							

Definition:

Timmins Milk Marketing Area

(a) Town of Timmins
(b) Township of Tisdale
(c) Township of Deloro
(d) Township of Mountjoy

MILK DISTRIBUTOR LICENSES—KIRKLAND LAKE

Year	Total Licenses Issued (all D licenses)	Total Licenses Discontinued	Comments
1934	5		
1935	5		
1936	4	1	Model Dairy taken over by Lindfors Dairy
1937	4		
1938	4		
1939	4		
1940	3	1	Palm Dairies taken over by Lindfors Dairy
1941	3		
1942	3		
1943	2	1	S. D. Eplett & Sons taken over by Lindfors Dairy and Producers Dairy
1944	2		
1945	2		
1946	2		

Definition:

Kirkland Lake Milk Marketing Area

The Townships of Grenfell, Eby, Teck, Otto, Lebel, Boston, Gauthier, McElroy, McVittie, Hearst, McGarry, McFadden, which townships include among others, the places known as: Kirkland Lake, Swastika, Larder Lake, Virginiatown.

APPENDIX 21

THE DELIVERY OF MILK IN TORONTO

Introduction

This report gives the results of a survey among Toronto housewives to ascertain their practices and preferences in the delivery of milk. In all, 503 women were interviewed in nine wards and also in the districts of Kingsway, Swansea, Forest Hill and Leaside. By income groups they were divided as follows:

High income group	51
Second income group	150
Third income group	239
Low income group	63
	503

Of the total number interviewed 258 had adults only (i.e. over 16 years of age) in the family, and 245 had children. The actual interviews were carried out by Canadian Facts Limited, whose letter is reproduced on page 9.

The number of people in these families followed a typical distribution:

No. in family	Without children	With children
1	19	....
2	89	....
3	62	54
4	56	71
5	16	57
6	8	32
7	....	15
8	1	7
9	1	4
10	2	2
More than 10	3	3
Information refused	1	1
	258	245

Do you have your milk delivered to your home by a dairy?

Of the 503 housewives interviewed, as many as 486 (96.6%) have their milk delivered to their home; only 17 (3.4%) obtain their milk from a retail store instead of from the dairy wagon. One of these was in the high income group, 10 in the third, and 6 in the low group. The answers of these 17 have been shown separately because many of the questions did not apply to them. They follow the analysis of the answers of those who have milk delivered to their homes.

Would you like to see home delivery discontinued?

Of the 486, 480 said they would not like home delivery discontinued. We have taken the answers as given, but it appears that of these six who stated they would not mind discontinuance of home delivery, only one answered correctly; the other five showed by their other answers that they appreciate home delivery. The one exception was a woman who said that it was awkward to have delivery at her home as she is working during the daytime.

Do you ever buy milk from a retail store?

Of those who normally have milk delivered to their home, 320 (65.8%) never buy in any other way. Supplementary purchases are made at a store by only 166. More families with children also buy at stores (40.8%)

than those without children (27.8%). Only 8 make store purchases every day, and most buy once a week or less, as the following table shows:

Frequency of buying	*No. mentioning*
every day	8
2 or 3 times a week	23
once or twice a week	7
once a week	33
twice a month	18
once a month	34
once every two months	7
every three months	9
twice a year	7
once a year	1
frequently	1
seldom	15

The reason most frequently given for buying at a store is that they run short. This was mentioned by 104 women. Other reasons were:

unexpected guests	18
for special cooking	15
if miss the milkman	8
if they need more	8
get it fresh from store	4
if driver late	2
after returning from week-end	2

Would it be possible for you to go to the store every day for your milk?

More than half of the women said that it would be impossible for them to go to the store every day for milk if they had to do so. As the income group increases, the percentage saying they could not go also increases, i.e.

could not go every day

high income group	30	60.0
second income group	88	58.7
third income group	109	47.6
low income group	20	35.1
families without children	136	54.8
families with children	111	46.6
Total	247	50.8

The women who said they could not go to a store every day for milk gave the following reasons:

	Without Children	With Children	Total
Have babies or young children	—	49	49
Too busy	21	16	37
Health reasons	16	9	25
Can't go out every day	14	7	21
Inconvenient	14	7	21
Can't carry	9	7	16
Too old	15	1	16
Too far to go	7	4	11
Goes to work	9	2	11
Weather sometimes bad	7	2	9
Buys too much milk to carry	6	2	8
Can't walk	6	—	6
Unwilling	6	—	6
Telephones for all groceries	2	—	2

	Without Children	With Children	Total
Too "primitive"	—	2	2
Takes care of invalid	2	—	2
Too lazy	1	—	1
Store milk not fresh	—	1	1
Wants it early in the morning	—	1	1

Would you have any objection to delivery of milk to your home every second day only?

The suggestion that milk might be delivered every second day only was objected to by 213 (43.8%). The number who have objections is larger in the two lower income groups than in the two higher, and is also larger among families with children than among those without children, i.e.

have objections:	%
high income	38.0
second income	38.7
third income	45.0
low income	57.9
without children	34.5
with children	52.5

Do you consider the milk you buy better than that sold by other dairies?

A majority of the women think the milk they buy is better than that sold by other dairies (251 out of 486, or 51.6%). Only in the low income group is the percentage low, i.e.

	%
high income	62.0
second income	51.3
third income	52.8
low income	38.6
without children	54.4
with children	48.7

Would you be content if you were compelled to buy from a single dairy, not of your own choosing, which is given the sole right to deliver milk to your house?

More than half the women would not be content to buy from a single dairy, not of their own choosing, if it were given the sole right to deliver to their homes (253 out of 486, or 52.1%). Again, the low income group appears to be the most particular, i.e.

would not be content:	%
high income	52.0
second income	39.3
third income	55.0
low income	73.7
without children	52.8
with children	51.3

Are you buying less milk for your family since the price went up?

About one out of five families are apparently buying less milk since the price went up; these are almost equally divided between those who are buying substantially less, and those buying slightly less. Naturally, a larger proportion of those with lower incomes are buying less than those with higher incomes, i.e.

are buying less milk:	*no.*	%
high income	7	14.0
second income	20	13.3
third income	63	27.5
low income	15	26.3
without children	43	17.3
with children	62	26.1
Total	105	21.6

The answers of those buying less were as follows:

	Substantially less	Slightly less	Not given
High income	1	4	2
Second income	9	11	–
Third income	28	34	1
Low income	10	4	1
Without children	16	25	2
With children	32	28	2

At What Hour of the Day Do You Like to Receive Your Milk?

Eight o'clock is the most popular hour at which those interviewed like to receive their milk. The detailed answers were as follows:

Before 7 a.m.	1	10 a.m.	39
Before 8 a.m.	4	10.30	2
Before 9 a.m.	2	11.00	28
Before 10 a.m.	3	11.30	2
Before 11 a.m.	1	Noon	16
7 a.m.	52	1 p.m.	2
7.30	56	3 - 4 p.m.	1
8.00	130	6 p.m.	1
8.30	29	Morning	19
9.00	73	Any time	7
9.30	11	No answer	7

(answers like "between 8 and 9" have been shown as 8.30)

Answers of Those Buying Only from Stores

Of the 17 women who buy their milk only from retail stores, one buys twice a day, 8 buy every day, and 3 every second day. Five did not say how often they buy.

The reasons given for using a store were:

more convenient	3
avoid trouble with tickets	2
don't like people at door	1
get milk when need it	1
lives near dairy	1
prefer from store	1
milkman won't climb stairs	1
doesn't buy much	1
prefer grocer to deliver	1

Five gave no reasons.

Only 3 out of the 17 thought that their brand of milk was better than other brands. Three also said that they were buying less milk since the price went up; all three said "slightly less".

HOUSEWIVES—HOME INTERVIEWS

1. (a) Do you have your milk delivered to your home by a dairy?
Yes............ No............
(b) (If YES) Would you like to see home delivery discontinued?
Yes............ No............
2. (a) Do you ever buy milk from a retail store? Yes............ No............
(b) (If YES) How often would you say you do this? ....
(c) Could you tell me why? ....
3. (a) Would it be possible for you to go to the store every day for your milk? Yes............ No............
(b) (If NO) Would you mind telling me why it isn't possible? ....
....
4. Would you have any objection to delivery of milk to your home every second day only? Yes............ No............
5. Do you consider the milk you buy better than that sold by other dairies? Yes............ No............

6. Would you be content if you were compelled to buy from a single dairy, not of your own choosing, which is given the sole right to deliver milk to your house? Yes........... No...........
7. (a) Are you buying less milk for your family since the price went up?
   Yes........... No...........
   (b) (IF YES) Would you say substantially less or just slightly less?
   Substantially less........... Slightly less...........
8. At what hour of the day do you like to receive your milk? ....

BASIC DATA: Ward or District: ....
Occupation of head of house: ....
Name: ....
Address: ....
City: .... Telephone Number: ....

No. in Household	*Income Group*
Adults (over 16)	A........
Children:	B........
	C........
	D........

CANADIAN FACTS LTD.

Toronto, Ontario,
February 4, 1947.

Cockfield, Brown & Co. Ltd.,
Canada Cement Building,
Montreal, P.Q.

Attention: Mr. Henry King

Dear Mr. King:

We are very glad to outline for you the basis on which we conducted the poll of Toronto opinion on milk distribution for you.

In the first place, the questions asked were supplied by you. We had no part in their development, nor any knowledge of their purpose or who among your clients might be interested in the facts and opinions gathered.

The collection of the information was our responsibility. In this part of the project we worked entirely independently, turning over to you the questionnaires as they were completed by our field representatives.

Each questionnaire was completed by means of a personal interview with a housewife in her own home. The corps of representatives assigned to conduct the interviews were selected for their experience in this particular type of work. They, of course, had no knowledge of the client for whom the work was being done.

The 500 housewives interviewed are a good cross section sample of all Toronto housewives. This was assured by two means.

First, the 500 interviews were apportioned between the nine wards and four contiguous municipalities in proportion to their populations. This assured coverage of all sections of the city, each section in proper proportion to the others.

Second, interviews were randomized to cover representative homes in all sections of each ward or municipality.

With a smaller sampling of the city we ordinarily select homes in four or five sections of the city in accordance with pre-determined quotas that assure a representative coverage of the various age groups and economic levels.

With the 500 interviews called for in this study we were able to achieve a more widely representative cross section by the method outlined above. However, the proportions of the actual sample do match closely the economic level quotas which we have found from long experience are typical of Toronto.

In our opinion, therefore, you are justified in assuming that the 500 or more housewives interviewed are a reasonably representative cross section of the community.

Yours very truly,

John F. Graydon,

President.

APPENDIX 22

COPY OF MEMORANDUM FURNISHED COMMISSION AND DISTRIBUTORS' ASSOCIATION BY GOVERNMENT OF NEW ZEALAND

In respect of the Wellington Area

Department of External Affairs,
Wellington, N.Z.
2nd December, 1946.

MEMORANDUM for:—

R. M. Firth, Esq.,
Official Secretary,
High Commissioner for New Zealand.
Ottawa,
CANADA.

In response to the request of the Ontario Milk Distributors' Association for information concerning the Wellington City Milk Corporation forwarded by you, the following data is supplied:

1. Taking one (only) recent month, the *weekly* average number of *quarts* of milk sold equalled 414,700. Sales are on the increase.
(Not including milk for cream sales.)

2. Cost of milk delivered *at receiving* stage of depot.

	Per Gallon		Per Gallon	Average B.F. Test
Summer	12.47d			
(5½ months) Plus cartage	1.46d	=	13.93d	4.3%
Autumn				
(2½ months) Plus cartage	15.60d			
	1.46d	=	17.06d	4.7%
Winter				
(4 months) Plus cartage	23.33d			
	1.46d	=	24.79d	4.9%

Milk prices are fixed by the Government and the above prices are expected to be increased by .78d. per gallon very shortly.
Note:—

(a) The foregoing producer prices includes a Government Subsidy of 2.409d. per gallon.
(b) Producer prices vary according to the butterfat content of milk.
(c) Milk is purchased on a butterfat basis together with a price per gallon termed added value.
(d) A gallon of milk weighs 10.31 lbs.
(e) Milk is not purchased in New Zealand at a price per cwt.

3. Cost of milk for manufacturing purposes, e.g., surplus to liquid milk requirements.

17.75d. per lb. butterfat.
plus 0.65d. per gallon of milk
plus 3.904d. per lb. butterfat Government subsidy.
Average butterfat test for year, 4.6%.

4. Wages:

Dairy (plant) employees:—
General hands, £5 13s. 2d. + 5s. extra p.m. shift.
Leading hands, £5 18s. 2d. + 5s. extra p.m. shift.
Half time extra Saturday afternoon, double time on Sunday, treble time on Statutory holidays
Plus:—
(a) Overalls and aprons provided free.
(b) Gum boots supplied free.

(c) Subsidy provided by City Council to employees Insurance Scheme, also to Sick Benefit Scheme.

Under the terms of a new Award likely to be ratified by the Arbitration Court very soon, the above rates may be increased by an average of approximately 5s. 6d. weekly.

All employees work a 5 day week of 40 hours.

Wages:

Deliverymen:—

Wages vary considerably as many different classes are at work throughout the organization. Those engaged on distribution also vary according to whether he is a motor driver, a cart roundsman, a motor roundsman, or a relieving roundsman.

The gross *basic* rates are:—

	£	s.	d.
Motor Driver	6	15	3
Motor Roundsman	6	14	8
Cart Roundsman	6	8	11
Relieving Roundsman	6	17	0
Relieving Motor Roundsman	7	2	10

Under the terms of a new Award likely to be ratified by the Abritration Court very soon, the above rates may be increased by an average of approximately 5s. 6d. weekly.

Overtime is paid at 1½ times first four hours and double time thereafter.

All employees work a 5 day week of 40 hours.

5 & 6. The Milk Department pays all general taxation in the same way as a private Company would, except Income and Social Security Taxes, local bodies being exempted from payments under the latter heading.

7 & 8. Depreciation:

Concrete buildings	2%
Wooden buildings	3%
Plant, depending on type of unit	2½% to 10%
Motor vehicles, depending on size	10% to 20%
Carts	5%
Harness	20%
Milk cans and crates	10%

9. Cost of fuel at plant: Coal, £1 19s. per ton; Gasoline (wholesale), 2/3½d. per gallon.

10. Cost of carts (wagons). None have been purchased for 10 years but the estimated cost per cart today is £140.

No ½ or 1 ton trucks are used.

This Department recently purchased a 1½ ton truck (K3 International) for £740 plus tray £60, total £800.

11. Re personal income tax. Under present day labour shortages a good deal of overtime is worked. Taking a large number of employees, the average income during the latest Income Tax year was £466.

	£		£	s.	d:
Income Tax on	466				
Less exemptions	100				
Balance 66 at 2/6 in £		=	8.	5.	0
+15%, (reduced from 33⅓)		=	1.	4.	9
			9.	9.	9
Social Security Tax, £466 at 2s.		=	46.	12.	0
Income Tax and Social Security on £466 for married man and two children		=	56.	1.	9

12. (a) White bread: . . . . . 5½d. for 2 lb. loaf.
(b) Sugar: . . . . 4d. a lb.
(c) Potatoes: old . . . . . 2d.—2½d. lb.
new . . . . . 3½d.—7d. lb.
(d) Cheese: . . . . 1s. lb.
(e) Butter: . . . . 1s. 6d. lb.
(f) White flour: . . . . . . 4s. 4d. per 25 lb. bag.
(g) Eggs: Grade A . . . . 1s. 10½d.—3s. 4d. dozen.

(h) Blade beef: . . . . 8d. 8½ lb.
(i) Sirloin beef: . . . . . . plain 10d.—10½d. lb., rolled & boneless 1s. 1d.—1s. 1½d lb.
(j) Bacon: . . . . 1s. 6¼d. lb.
(k) Mutton: leg . . . . . . 10d. lb., shoulder 7d. lb.
(l) Milk: . . . .

	Summer Selling Period Bottled Retail Supplied by Department for Tokens	Loose Retail Supplied by Milk-shops for cash only
Per quart	6½d	6½d
Per pint	3¼d	3½d
Per ½ pint	. . . .	2 d

Bulk Retail per gallon

3 gallons and under 10 gallons . . . . 1 11d per gallon
10 gallons and over daily . . . . 1 10d per gallon
To dairy-shops for re-sale . . . . 1 10d per gallon

Cream; (40% Butterfat Test)		
Per Pint	2 -d	2 -d
Per ½ Pint	1/ -d	1 -d
Per ¼ Pint	6d	6d
Per 4 Pints and over (per gallon)	15 -d	
To Dairy-shops for re-sale		14 -gallon

	Winter Selling Period Bottled retail Supplied by Department for Tokens	Loose retail Supplied by Milk-shops for cash only
Milk		
Per quart	7 d	7 d
Per pint	3½d	3½d
Per ½ pint	. . . .	2 d
Bulk retail prices per gallon;		
3 gallons and under 10 gallons daily		2/ 1d
10 gallons and over daily		2 —d
To Licensed Milk-shops for re-sale		1 11d

Cream; (40% Butterfat Test)	Bottled retail Supplied by Department for coupons	Loose Retail Supplied by Milk-shops for cash
Per 4 pints and over	15s per gall.	15s per gall.
Per Pint	2s.2d	2s.2d.
Per ½ Pint	1s.1d.	1s.1d.
Per ¼ Pint	7d.	7d.

Although not requested, I give the following information:—

(a) Pasteurising costs, 2d. per gallon.
Bottling costs, 2d. per gallon.
Distribution costs (retail), 7¾d. per gallon.
Distribution costs (wholesale), 3½d. per gallon.

(b) The City Council through its Milk Department has absolute control from farm to consumer of the city milk supply. The Government controls prices only.

(c) The Revenue of the Department is now approaching £700,000 annually.

(d) 30,000 customers are served daily.

(e) The token system of payment has been in use for 24 years. Under this system no debts are incurred. A clean sheet is shown in this respect.

I trust the foregoing will serve a useful purpose to the Association concerned.

Secretary of External Affairs.

Excerpt from New Zealand Royal Milk Commission—1943 in respect of the Wellington Area.

Present Circumstances of the Supply of Milk to the Metropolitan Area of Wellington.

The Wellington Metropolitan Area comprises Wellington City, Lower Hutt City, Petone Borough, Eastbourne Borough, Johnsonville Town District, and some adjoining and closely-related areas. The whole area is divided into two sub-areas, one comprising the City of Wellington and its immediate environs from Seatoun up to Johnsonville, and the other the flat land and surrounding hills in the Hutt Valley and the bays on the eastern shore of the harbour. Both sub-areas are fairly widely spread. That comprising Wellington City and its immediate environs is for the most part hilly and is not convenient for the purposes of distribution. The Hutt sub-area is for the most part flat and, apart from the limited population on the hills fringing the valley and the bays, presents conditions favourable to expeditious distribution.

Demand

Population

According to estimates published in the 1942 issue of the Year-Book the total population of the metropolitan area on 1st April, 1941, was 160,500, of which 36,020 persons were living in the Lower Hutt City and the Boroughs of Petone and Eastbourne. In addition to this population the liquid-milk industry in this centre has to supply the needs of shipping, of men of the Armed Forces, and of children in schools outside the area which draw milk from the area. The quantities required for shipping are considerable, but neither these quantities nor those for the Armed Forces can be exactly computed. The number of children in outside schools for whom provision is expected is 2,907 and half a pint of milk is required for each child on each school day.

The following figures for the whole metropolitan area taken from the Year-Book indicate the growth of the population:—

1911	82,800	1926	121,527
1916	95,235	1936	149,382
1921	107,488	1941	160,500

These figures show a fairly uniform increase of approximately 2,500 per annum over the thirty-year period. Some variation may be due to the irregular development during some periods of districts just outside the urban area and to the inclusion at other times of such districts in the area. In estimating future requirements the continuance of this growth, with a corresponding increase in attendance at outside schools and an increase in shipping requirements, must be taken into consideration. The requirements of the Forces will ultimately drop rapidly, but against this must be set the demand of a large body of our own Forces returning to civilian life. And, perhaps more important than these movements, may be the stimulus to increased consumption per head of the population imparted by the teachings of nutritionists and the appeals of health authorities.

Present Consumption

The milk Department of the Wellington City Council has supplied a return of milk sold by the Department year by year during the five years ending 31st March, 1943. This return is as follows:

Year ended 31st March	Milk, in Gallons	Cream, in Pints
1939	2,628,953	419,257
1940	2,917,437	474,664
1941	3,063,021	481,992
1942	3,107,306	530,872
1943	3,883,638	665,145

The nearby farmers have not kept accurate records of their sales, but they supplied an estimate of the daily gallonage sold during the month of August, 1942, at 2,986½ gallons. This is an estimate only. Probably a general statement that the sales average between 2,500 and 3,000 gallons per day or between 900,000 and 1,000,000 gallons per year is the only one that can be made with any justification. The Milk Department, however, supplied 74.190 gallons of milk and 91,981 pints of cream to nearby farmers during the twelve months ending 31st March, 1943, and as this is included in the total sales of the Department only the balance of the nearby farmers' sales is to be added to the Department's figures in arriving at the total sales. Computing the daily sales by the Department and adding those by the nearby farmers we have as the total average daily sales during the twelve months under review of something over 13,000 gallons of milk and about 2,000 pints of cream. The Hutt Valley and Bays' consumption is distributed by vendors, producer-vendors, and the Wellington Dairy Farmers' Association. The daily output, in gallons, by members of the Hutt Valley and Bays' Milk Vendors Association has been returned to the Commission as 3,371¾ gallons, or 1,230,688 gallons per annum. The greater part of this is supplied by the Wellington Dairy Farmers' Co-operative Association. Ltd., who, in addition, supply 800 gallons per day. or 292.000 gallons per year, to shops for resale and further quantities to camps and shipping. During the year ended 31st March, 1943, the association supplied to the last-named two groups a total of 223,173 gallons. Adding the quantities sold by the association to shops, shipping, and camps to the quantities sold by the vendor members of the association, we have the total of the sales during the year ended 31st March, 1943, of 1,745,861, or 4,783 gallons per day. The grand total for the metropolitan area—that is, of the Wellington and Hutt Valley sub-areas combined—when cream is computed as gallons of milk works out at over 7.500.000 gallons per annum, or over 20,548 gallons per day.

Prospective Expansion of Demand

Though complete figures showing the expansion of demand during recent years are not available the returns from the Milk Department of the Wellington City Council for five years and those from the Wellington Dairy Farmers' Association for three years give an indication of the expansion of consumption. The Department's figures are quoted above. The totals from the Wellington Dairy Farmers' Association for the three years ending 31st March, 1943, are as follows:—

Year ending 31st March, 1941	1,073,567
Year ending 31st March, 1942	1,171,019
Year ending 31st March, 1943	1,365,814

As these figures, as well as those of the City Council, include the very irregular supplies to camps the inference to be drawn from the figures must be guarded. But, so far as the Dairy Farmers' Association's figures are concerned, if the supply to shipping and camps were entirely eliminated, the increases between 1941 and 1942 would be 48,260 gallons and that between 1942 and 1943 would be 159,424. But even in this respect the special demands of milk-bars and institutions qualifies the result.

A better guide is probably to be found in the increase in population, both in towns and in schools, with its reaction on other matters such as shipping and visitors. In this connection three factors have to be noted. One is the dispersal of the Armed Forces at the end of the war; another is the return to civilian life of something like 10 per cent of the population; while the third is the stimulus to increased consumption per head of the population. If all these factors are taken into consideration any long-term policy must anticipate and provide for a considerable increase in the daily demand disturbed, perhaps somewhat violently, during the period of repatriation.

Organization

Features of Present Organization

The organization of the Milk-supply to Wellington is unique in several important features.

Municipal Milk Department and Wellington Dairy Farmers' Association.—The first feature is the co-existence of and co-operation between a Municipal Milk Department and a strong organization of suppliers. Among treating and vending houses in New Zealand the Milk Department of the Wellington City Council is conspicuous in respect of volume of business, the standard of production, and completeness of organization. Among organizations of suppliers the Wellington Dairy Farmers' Co-operative Association, Ltd., is conspicuous in its comprehensiveness of scope, its persistent and successful endeavour to maintain a high standard, and its capacity to conduct successfully the affairs of a large group of suppliers. In co-operation the Milk Department and the Farmers' Association have controlled the major part of the liquid-milk industry of the metropolitan area of Wellington for nearly a quarter of a century. Their ability to meet and negotiate has ensured the smooth and efficient working of the industry during that period. By processes of negotiation and arbitration a higher price per gallon has been secured for the producer than has been secured in any other area and a higher-quality milk has been delivered. The growth of the population and the increasing pressure on the sources of supply, is developing a new situation, but it is reasonable to hope that, with certain necessary modifications in organization and relationship, the co-operation hitherto displayed will continue to exercise a guiding and controlling influence over the developing industry to the advantage of all concerned.

Contracts for the supply of milk have been made from time to time between the Wellington City Council and the Wellington Dairy Farmers' Association, Ltd. Features of these contracts that have endured for some time are:

(1) Subject to certain qualifications, the association has a right to supply 50,000 lb. of milk per day from the 30-mile area;
(2) If during the summer and autumn periods the association cannot supply the specified quantity from the 30-mile area, the Council has the right to obtain the shortage from its Rahui Factory, but if it cannot do this the association has the right to supply it from outside the 30-mile area;
(3) If during the winter period the Council requires more than 50,000 lb. of milk per day, it is to give the association the opportunity to supply from the area extending beyond the 30-mile limit up to Levin one-half of its requirements up to 1,700 gallons per day, and two-thirds of its requirements in excess of an additional 3,400 gallons per day.

The specified 50,000 lb. of milk per day has been included in successive contracts for a number of years, though it is understood that an increase to 60,000 lb. in the next contract is contemplated. The continuance of this fixed amount during a period of continuous growth in the population has meant that the contractual rights of the association has affected a decreasing proportion of the city's total consumption. This has not in practice greatly affected the Dairy Farmers' Association, since the orders have exceeded the prescribed amount and the increasing consumption in the Hutt Valley has absorbed a considerable portion of the production of the members of the association. Disputed matters, such as price, are settled by arbitration.

Relation of Vendors in Hutt Valley to Wellington Dairy Farmers' Association.—The second feature of the organization of the supply to the metropolitan area is the relation of the Dairy Farmers' Association to the vendors in the Hutt Valley and the cordial co-operation of these two bodies. This has had a double effect. It has given the Hutt Valley Vendors and their consumers a supply assured by a powerful producers' association, and it has given to the members of the association an assured and growing market for which they were able to organize their resources.

Limit of Contracts.—The policy of the Milk Department of the Wellington City Council appears to be to contract for quantities considerably less than its anticipated requirements and to arrange for additional supplies in the period of the year in which they are called for. It is not suggested that it does not estimate its requirements or that such estimates have been faulty. Nor is it suggested that it overlooks the question of the extent of the resources on which it can rely. The feature is that provision by forward contract is made for part only of its needs and that for the remaining part reliance is placed on its ability to call upon other resources as the need arises. Complaints were made by farmers that the Council would not enter into contracts for a term sufficiently long to justify them in organizing their farm economy for the supply of liquid milk to the area. It certainly appears that many farmers who could undertake city supply have been unwilling to do so because of the uncertainty attaching to the continuance of the demand. It is understood that the Department on one occasion suffered by over-commitment and that it has been careful to avoid a repetition of that experience. It has been urged that a body such as a City Council cannot commit itself with the freedom of a proprietary concern. If this means that a municipality cannot fairly estimate its requirements in respect of so vital a commodity as liquid milk and make contractual agreements for ensuring adequate supplies for the community, then it would be at a serious disadvantage in competition with private enterprise. But the Commission is not satisfied that any such limitation necessarily attaches to a public service of this nature.

When the Milk Department of the City Council commenced its operations in 1919 the liquid-milk supply to Wellington had sunk to a very low level. The Department rapidy improved the position and after taking over retail delivery in 1922 it raised the service to a standard unexcelled in New Zealand and that challenges comparison by any other system in any part of the world. But it is impossible to contemplate with equanimity the introduction of large supplies from outside sources. And it was profoundly disturbing to hear resort to such supplies approved as a permanent feature of the supply policy of the Council. There does not seem to be any valid reason why the Council should not fairly estimate the whole of its requirements with a reasonable degree of accuracy. The present daily demand is known to be approximately 12,700 gallons. Yet the Milk Department has made forward contracts for next winter's supply amounting to 9,000 gallons per day only. To make contracts that would bind an organization or organizations of supply to have the estimated quantities with a surplus of, say, 10 per cent., available at all times is surely reasonable. With such contracts the supply organization or organizations could organize its or their resources and make its or their plans in such a way as to protect producer members and give reasonable stability to the industry and assurance to the consumers. Any treating and vending body that proceeded on these lines would be entitled to protection in respect of violent fluctuations occasioned by the prosecution of public policy, such as the movement of Armed Forces, and there seems no reason why that protection should not be afforded. In Parts II and III of this report the Commission has made recommendations that it hopes, if adopted, will assist in overcoming the difficulties and ensuring adequate supplies of milk of high standard at reasonable prices. These difficulties must be overcome or the risk of more severe shortage and more extensive reliance upon unsatisfactory supplies must sooner or later be the outcome.

Supply—Natural Conditions

The source of supply for the metropolitan area is unique. It is divisible into several supply areas. First, there is the area within two miles of the city's boundary. This is occupied by the farms of producer-vendor whose function and right is recognized by the Wellington City Milk Supply Act, 1919, and its amendments. This area is very broken and the soil is mostly of poor quality. It has the advantage of immediate proximity to the area of distribution, and this advantage is of importance to the small man who both produces and vends his own milk and is able to eliminate most of the cost incident to collection from a distance. This area produced something in the vicinity of 900,000 gallons of milk last year, or a daily average approaching 2,500 gallons. The next area is that outside the 2-mile area but within a radius of 30 miles of the city and comprises mainly the land in the Hutt Valley and adjacent valleys, the slopes surrounding these valleys and those adjoining the 2-mile area, and land extending up the west coast as far as Paraparaumu. The milk drawn from this area for the City of Wellington and its immediate environs is drawn through the Wellington Dairy Farmers' Co-operative Milk Supply Association, Ltd., while that supplied to the Hutt Valley and associated district is drawn from the same association and from producer-vendors. Though the land in this area cannot be classed as high-class dairying country it includes pockets of good land and produced during the year ending 31st March, 1943, some 1,851,313 gallons, or an average of 5,072 gallons per day. The third area extends up the west coast as far north as Levin, which is 59 miles distant from Wellington, and includes, in addition to Levin, the districts of Packakariki, Paraparaumu, Waikanae, Te Horo, Manakau, Obau, and Otaki. The portion of this area that lies nearest to Wellington is hilly and generally of poor quality. As the area extends farther north it includes increasing quantities of flat land of good quality. Outside these normal areas of supply are other territories stretching to Bunnythorpe on the one hand and Pahiatua on the other, from which the metropolitan area has drawn emergency supplies.

Cows

Within the three areas described there were, when the 1940-41 statistics were compiled, 47,534 cows. But the number of dairies registered within the territory for town milk-supply in the five years from 1939 to 1943 inclusive, which includes the farm dairies from which the Hutt Valley supply is drawn, is given by the Department of Agriculture as follows:

Year	Registered Dairies.	Number of Cows Milked.
1939	459	16,956
1940	494	17,312
1941	500	18,445
1942	509	19,554
1943	502	19,086

A comment on the return conveys the information that not all the registered dairies supply milk to the Wellington City Council, but that fully 75 per cent. of the total are constant suppliers to the city. During the year ended 31st March, 1943, 13,922 gallons of milk were purchased from Shannon, and during the present winter season considerable quantities have been drawn from suppliers holding temporary licenses only. These licensees were scattered over a wide area. There were twenty-six at Levin, fifteen at Shannon, five at Tokomaru, seven at Linton, forty-eight at Bunnythorpe, and, as commented in the official return made to the Commission, in addition to these, Glaxo Laboratories have been receiving for transport to Wellington a considerable quantity of milk from unregistered suppliers.

It is not possible in the case of Wellington to show the monthly variations in the total supplies to the whole metropolitan area as, with the assistance of the returns kept by the Metropolitan Milk Council, it was possible in the case of Auckland. A reliable guide to the position may be obtained from the fact that in 1942. while in the summer supplies from the 30-mile area were sufficient, in the winter months of May, June, and July the Milk Department obtained from the 30-mile area a daily average of 3,278 gallons and from outside that area a daily average of 7,073 gallons per day. A further indication of the trend may be found in the very large quantities of milk that since 31st March last have been obtained from factories outside the three areas of supply.

Balancing-station

A third feature of the organization has been the control and operation by the City Council of a factory at Rahui as a balancing station. This is owned and operated in accordance with an agreement made between the City Council and the Rahui Suppliers Society, Incorporated. Agreements pursuant to this agreement are made with the individual suppliers. Under this agreement the Council augments its supplies and uses any excess for manufacturing purposes.

Seasonal or Level Supply

It is questionable whether an attempt to maintain an all-the-year-round level supply in any of the supply areas would at present be successful, or, if successful, would be economical. As already indicated, the greater part of the land in the 30-mile area is not of high fertility and winter feed is expensive. Much of the land running northward from the 30-mile limit up to Levin and Shannon is of greater productive capacity. But Levin is

59 miles from Wellington and it is doubtful whether a well-adjusted summer price would be an incentive to the farmers to send milk to the city in the summertime rather than deliver it to the factory. The winter price, however, may well prove an incentive to many farmers in that area to develop winter production and so meet a real need of the city with appreciable advantage to themselves. In this way summer production in the 30-mile area and winter production farther north by farmers with dairies that qualify them to hold permanent licenses for town milk-supply would together supply all-the-year-round wholesome milk that could be subject to the highest recognized degree of control designed to safeguard quality and standard. But such a supply requires organization and suitable contracts.

Shortage of Supply

The supply to schools was suspended for three weeks last winter. This year the Milk Department imported from factory suppliers outside the normal areas of supply quantities in excess of 2,700 gallons a day, and there was still a daily shortage of 2,500 gallons. As a result of this shortage milk-supplies to school-children were rationed in February and March and, except for a partial supply to children at kindergarten, have since been entirely cut off. Supplies to the Armed Forces and to milk-shops and milk-bars have also been rationed. The milk from outside suppliers has been brought from factories as far afield as Bunnythorpe and Pahiatua.

As in other areas, so in Wellington war conditions have created special difficulties. It has increased the demand, and the increase has been irregular and has fluctuated severely. It has added to the difficulties of production by causing a reduction in the fertilizer available and a serious shortage of labour. Wellington has not suffered as Auckland has suffered from a prolonged drought. The difficulties are real. But in the opinion of the Commission they are not due solely to war conditions. The population has been increasing steadily. A scheme to supply milk for school-children has been developed and put into operation. The value of milk as an article of diet has been urged and is likely to have appreciable effect. Even had there not been an outbreak of war a crisis in the milk industry seems to have been likely. In any case, these difficulties for the current year ought to have been foreseen. The increased demand and the greater difficulty in production have been growing for several years and are still present. Their continuance must be expected and provision made accordingly. In the opinion of the Commission the policy of the Milk Department of the City Council is responsible in no small degree for the shortage. The cows are in the fields and a source of supply more than sufficient to meet all the needs of the area is available within reasonable distance of Wellington. But it cannot be expected that it will be forthcoming unless the dairy-farmer has the assurance that can come only from contracts covering appropriate periods. The regular suppliers at Rahui complain that the City Council persists in refusing to make contracts covering its real requirements.

The worst feature of the situation. in the opinion of the Commission, is not the shortage, though that is serious enough, but the resort to sources of supply beyond the areas in which standards for city milk-production have been established.

Methods of Production

In the Wellington supply areas Jersey and Jersey crossbreds predominate. This is due no doubt to the fact that milk is purchased on the basis of its butterfat content.

There is no systematic attention to the elimination of T.B. and other bovine diseases. A limited test was made when it was required that the raw milk supplied in a military camp should be drawn only from T.B. tested herds, and, as noted later. this showed a percentage of reaction of 5.4 per cent.

The problem of replacement of stock is as urgent in this as in other areas. As elsewhere, the mischief consequent upon purchase from sale-yards is recognized, but the urge to keep on the farm only cows that are in or about to come into profit checks the development of breeding one's own replacements. or of limiting purchases to those from well-known and high-standard herds.

The problem of winter feeding is more acute in this area than it is in Auckland and Christchurch, owing to the low fertility of much of the soil. Winter feed must be purchased at considerable expense, and this inevitably checks winter milking.

Farm Dairies

The Commission did not obtain adequate first-hand information of the condition of the farm dairies in the area. One difficulty mentioned in evidence that has to be faced is that of providing satisfactory cooling arrangements. In the summer period the water available is not of a low-enough temperature, and the provision of refrigerating-plant and cool storage must ultimately be insisted upon as a necessary part of the equipment of every dairy used for town milk-supply in this area.

Standard of Supply

In spite of difficulties that have had to be overcome, the milk supplied to the Milk Department of the Wellington City Council is of a uniformly high standard. Tests made by the Milk Department for the year ending 30th June, 1942, on samples taken day by day on all milk brought in from farm dairies show the following results:—

Percentage of non-compliance—

Reductase test	1.422 per cent.
Sediment	0.12 per cent.
Added water	0.002 per cent.
Tests for other abnormal conditions	0.011 per cent.
Plate count average	92,000

These results compare favourably with comparable tests made on samples of milk in all the other areas. The system of tests and grading and of payment according to standard adopted by the City Council and the full co-operation of the Wellington Dairy Farmers' Co-operative Association, Ltd., have contributed to this result.

The Commission has been informed that the emergency supplies brought from the factory suppliers in outside districts have proved to be reasonably good. In general this appears to be true; but it is also true that a bulk supply from Bunnythorpe comprising the produce of a considerable number of dairy-farms was subject to the reductase test and that it stood under the test for five hours only. This must be regarded as very far from satisfactory for a bulk supply in mid-winter.

Price to Producers

The price to be paid to the Wellington Dairy Farmers' Co-operative Association, Ltd., and the price to be paid to the Rahui suppliers is based mainly on the butterfat content of the milk, and the effect of the agreements entered into in each case is to adopt an adjusted average for the guaranteed price for butter and cheese and to increase that by an amount designated the "added value." This added value is obviously intended to compensate the producer for the extra cost incurred by him over that that he would incur in ordinary seasonal factory production. The prices paid to the producer are indicated in the following table supplied by the Milk Department of the Council. Butterfat rates are calculated at 17.25d. per pound butterfat for the summer and autumn periods, but at 17.25d. plus 85 per cent for the winter period:—

Period	Average Butterfat Test Per Cent.	Butterfat Value per Gallon d.	Added Value d.	Total d.
16th August to 31st January	4.32	7.67	2.87	10.54
1st February to 15th April	4.74	8.42	4.50	12.92
16th April to 15th August	4.89	16.06	3.25	19.31
Weighted averages	4.59	10.53	3.33	13.86

Collection

The milk sold by the nearby farmers is brought into town and vended by the farmers themselves. The milk drawn by the Milk Department from the 30-mile area is brought in by the Department, which lets contracts for the purpose. The milk is picked up generally at the farm-gate, but in cases in which the dairy-farm is off the main road the milk is brought by the farmer to a point of collection. The milk is placed on stands at the farm-gate or roadside, and these stands are supposed to be covered, but this provision appears to be neglected in many, if not in most, cases. The collecting vehicles are required to have suitable covering from the 1st October to the 30th April in each annual period so as to protect the milk from injury by the sun's rays. When milk is required from outside the 30-mile area it is carted to the station by the suppliers and brought into the city by train. Under their contract either party—that is, the producer or the Milk Department—may call for double daily delivery for the period from 1st November to 30th April, but the producer's right to call for delivery twice a day is contingent on evidence being available that the standard of the milk is suffering by the delay.

In the Hutt Valley the producer-vendors convey the milk they vend into the zoned area and the quantities supplied by the Wellington Dairy Farmers' Co-operative Association, Ltd., are collected by the Association from the individual farmers and delivered at the vendor's premises. The quantities supplied to milk-shops and camps is also collected and delivered by the association. The milk is collected once daily after the evening's milking. This milk is delivered in cans, but the separation and identity of supplies from different farms is not maintained in all cases, and the Department of Health states that in many instances it is unable to trace the supply back to its source.

The cost of collection by the Municipal Milk Department is 1.46d. per gallon, and the comparable cost throughout the other areas varies from 0.75d. to 1.126d. The cost to vendors of raw milk and the relevant share of the cost of producer-vendors must vary considerably.

Treatment

The most distinctive feature of the supply of milk to the Metropolitan Area of Wellington is that approximately 80 per cent of the milk supplied to Wellington—that is, to that portion of the metropolitan area excluding the Hutt—is handled by the Milk Department of the City Council. Of this amount, a quantity comprising between 74,000 and 75,000 gallons of milk and between 11,000 and 12,000 gallons of cream are supplied by the Department to forty-eight nearby farmers in the period of shortage. Three of these nearby farmers received in the year ending 31st March, 1943, 6,487 gallons of raw milk and the other forty-five received 67,703 gallons of pasteurized milk. As all the milk that the Department vends is pasteurized, very little short of 80 per cent of the liquid milk and cream passing into use in the Wellington City area is pasteurized. All the milk that is retailed by the Department and all that that is supplied to the schools is bottled, while the wholesale supplies and the supplies to the Armed Forces are delivered loose. The testing, pasteurizing, and bottling at the milk depot is excellent, and the system adopted has undoubtedly attained the best results in New Zealand.

The Milk Department of the City Council maintains a laboratory that is under the control of an analyst whose appointment was approved by the Health Department. Each day every supplier's milk is weighed on arrival at the depot and a sample is taken for testing. Part of every sample is subject to the reductase test, and for the year ending 30th June, 1942, 27,444 such tests were made and non-compliance with the statutory standard was established in only 1.422 per cent of cases. Altogether, 9,914 tests were made for butterfat content in milk and 1,398 for butterfat content in cream and 97 for total solids, and each of these tests was made on a composite sample of separate samples taken each day for ten days. The average butterfat content for the year was 4.486 per cent and of solids not fat 8.84 per cent. In the same period 4,942 tests were made for sediment and 1,716 for added water. There were 66 micro examinations, 6,038 agar plate counts, and 1,507 for B. Coli, 2,105 for fermentations, 448 for pH. values, and 202 phosphatase tests. Sediment was found in 0.12 per cent of the tests and added water in 0.002 per cent. Other abnormal conditions were found to exist in 0.011 per cent. An important feature of the tests applied to the suppliers' milk is that a financial loss is immediately attached to any milk found to be below standard. If the milk falls below the standard of four hours under the reductase test it is graded as second class. Once the milk of a supplier has been graded as second class succeeding supplies are not again bulked until after the result of the test has been ascertained. Then if it proves still to be second grade it is separated and the supplier is paid for it at 1d. below the rate allowed by the Council in respect of butterfat content. If the milk continues second grade until it has been separated on three days in succession, further supplies are condemned until the trouble is remedied, and the supplier receives no payment but is charged for cartage from the farm to the depot. If a supply does not stand up to the test for more than fifty minutes it is condemned at once and the supplier receives no payment but is charged for cartage until the standard of four hours is restored. This system of testing, grading, and payment has an immediate and direct effect on the quality of the supply.

Both pasteurizing and bottling are carried through under good conditions. After weighing, the milk is cooled to 38° F. It then flows into glass-lined insulated storage tanks. It is then pasteurized, filtered, and chilled in a unified milk-treatment machine. The bottles are machine cleansed, sterilized, filled, and capped. Every care is taken to avoid danger of contamination of the milk after pasteurizing and the bottles after sterilizing. There is no exposure to the air after the treatment of the milk or the sterilizing of the bottles until the point at which the milk enters the bottles; and filling and capping are carried out automatically by the same machine and as part of one process. All milk after pasteurizing and bottling is held in a refrigerated room until loaded for delivery. It should be stated that tests taken by the Health Department confirm the results found by the Milk Department and, further, that of the 2,215 samples taken in 1942 from all vendors only 75, or 3.5 per cent, failed to comply with the standards set by the Food and Drugs Act, while none of the samples taken from the Council's delivery carts were found to be at fault.

Milk distributed in the Hutt Valley is not pasteurized and none is bottled. This applies to the milk distributed to householders and to that sold in wholesale quantities and also to that supplied to the Armed Forces and to shipping. All the milk supplied to the Armed Forces is drawn from cows in T.B. tested herds. When the test was carried out it showed 5.4 per cent of reactors. This is very low compared with overseas experience, but it is still appreciable and gives emphasis to the recommendation that milk ought not to be distributed raw unless it is drawn from T.B. tested cows. Generally, the tests taken by the Health Department show that the butterfat content of the milk is satisfactory. Tests taken by the Wellington Dairy Farmers' Co-operative Association, Ltd., of their own milk shows 4.6 per cent butterfat. The standard in other respects is also high. The average tests of samples taken by the Health Department throughout the three central health districts other than Wellington showed failure to comply with statutory standards in 11.4 per cent of samples, while the percentage taken on the rounds in the Hutt Valley was 8.6 per cent only. The Wellington Dairy Farmers' Co-operative Association, Ltd., carry out daily tests on the milk collected by it, and this gives effective control over the standard of the milk. A recent communication from the Health Department directed attention to unsatisfactory features at the Wellington Dairy Farmers' Co-operative Association, Ltd.'s depot at the Lower Hutt and recommended that certain improvements in respect of sterilization and other matters be effected. The Commission was assured that the recommendations of the Department in respect of sterilization were receiving immediate attention.

It is necessary to refer again to the influence of the purchase of large quantities of milk from suppliers to butter and cheese factories outside the regular supply area. Under the administration of the Department of Agriculture and of the Department of Health control over the conditions under which town milk is produced has been effectively exercised and progressive improvement in these conditions has been secured. Use of emergency supplies as a common feature of town supply tends to break down that control and to lower the standard attained. It appears to be the case that the supplies purchased from outside sources in the winter of 1943 by the Wellington City Council was of a fairly good standard for milk so derived, but it was not up to the controlled standards, and the ultimate effect of dependence on such supplies must be such as to break down control and generally to lower the standard. In the opinion of the

Commission, such dependence must be regarded as a proof of failure to organize the city milk-supply effectively and ought not to be tolerated. The cost of the Municipal Milk Department for pasteurization is 2.16d. per gallon and for bottling 2.07d. per gallon. The comparable cost in other areas ranges from 0.99d. to 1.87d. per gallon for treatment and from 2.25d. to 3.32d. for bottling.

Distribution

Distributors

In Wellington milk and cream are distributed by the Milk Department of the Wellington City Council and by the nearby farmers. There are ninety-one shop dairies in the city. In the Hutt Valley and eastern bays it is distributed by vendors and producer-vendors and by shop dairies. In Wellington there are forty-five producer-vendors and in the Hutt Valley and bays district there are twelve producer-vendors and twenty vendors.

The quantities of milk delivered by these distributors is indicated by the following returns for the year ending 31st March, 1943:

Milk Department	3,883,638 gallons milk, 665,145 pints cream.
Nearby farmers	Total sales approximately 950,000 gallons, including 74,190 gallons milk and 91,981 pints cream purchased from the Wellington City Council.
Hutt Valley vendors and producer-vendors	1,230,688 gallons.
Wellington Dairy Farmers' Co-operative Association, Ltd.	To milk-shops, shipping, and Armed Forces, 515.173 gallons.

Classes of Purchasers

As is the case in other areas, the milk supplied in Wellington is divided up between various classes, including retail purchasers such as householders; wholeale purchasers, including restaurants, hotels, milk-bars, milk-shops, &c.; purchasers under special contract, including hospitals and other institutions, shipping companies, and Armed Forces. Sufficient information is not available to enable us to give particulars of the amounts distributed to each of the constituent groups, but the following return from the Milk Department of the City Council indicates the general grouping and the prices charged so far as their supplies are concerned:

	1940-41	1941-42	1942-43
Bottled milk (retail)	1,994,141	2,068,475	2,277,369
Bulk milk	808,908	788,025	1,345,788
School milk	259,972	250,806	186,291
Pints of cream	481,992	530,872	665,145
Ice-cream mix (1 gallon milk for 3 gallons mixture)	90,456	99,969	108,452

Prices

The prices charged were as follows:

Retail (bottled), average for 1943	27.796d. per gallon
Wholesale	5d. per gallon below retail

To regular purchasers of 250 gallons or more per month a rebate of 1½d per gallon is allowed

Hospitals School milk Armed Forces	Special contract prices.

Zoning

Owing to the fact that so large a proportion of the milk is distributed by the one large vendor the Wellington area was fairly effectively zoned before the system of zoning was officially adopted. The nearby farmers were zoned in 1942 and the Hutt Valley vendors in 1940. A certain amount of duplication of travel between the Milk Department and individual vendors is allowed so as to ensure to purchasers an opportunity to purchase either raw or pasteurized milk. As in other areas, considerable economies have been effected by the adoption of zoning.

Methods of Delivery

The Wellington City Council employs forty-three horsedrawn and eleven motor-driven vehicles on retail delivery rounds. It has four motor-vans employed on wholesale delivery and twenty-one other motor-vehicles used for feeder services, delivery to schools, and for collection from trains, &c. Of the forty-eight producer-vendors some use light vans on delivery. A number of them use private cars adapted for the purpose. In the Hutt Valley delivery motor-vehicles are used by twenty-two distributors, horse and cart transport by four, and other methods by six. It may be said that generally the vehicles and method are well up to the standard of delivery established in New Zealand, but no person watching the delivery in very hot and dusty or in very wet weather and noticing the uncovered condition of the vehicles would be inclined to approve it as ideal.

The roundsmen employed by the Wellington City Council now work 46½ hours per week; they start at 3 a.m. in summer and at 6 a.m. in winter; they travel on their rounds an average of twelve miles; they occupy seven hours on a round; and they deliver on an average 120 gallons per day per round. This high gallonage per day may be contrasted with the delivery at Auckland where the roundsmen deliver milk for 4½ hours per day only and where each roundsman has to handle both bottled and loose milk. The computed cost of distribution by the Milk Department is 6.43d. per gallon, as compared with from 7.65d. to 10.42d. by companies in other areas.

The forty-eight nearby farmers live close to the city and transport the milk they produce straight on to the round. As their average daily delivery is over 60 gallons it is doubtful whether any appreciable economy could be effected by any further rationalization.

In the Hutt Valley there are twelve producer-vendors. Some of them travel considerable distances to and from their rounds. The following examples illustrate the position:

One producer-vendor travels 40 miles to deliver 62 gallons. A second producer-vendor travels 30 miles to deliver 69½ gallons. A third producer vendor travels 20 miles to deliver 54 gallons.

These producer-vendors do not produce all the milk they deliver, but purchase portion of their milk from the Wellington Dairy Farmers' Co-operative Association, Ltd.

The twenty-raw-milk vendors—that is, vendors other than producer-vendors—in the Hutt Valley purchase the milk they distribute from the Wellington Dairy Farmers' Co-operative Association, Ltd., and as it is delivered to their premises there is no wastage in collection. Some of the premises however, are situated at considerable distances from the rounds. One vendor travels 15 miles to deliver 36½ gallons, while another travels 43 miles to deliver 150 galons.

Two features of the Wellington system of distribution are unique. Consumers are required to pay for their own bottles and payment for bottled milk is made by tokens. The wastage of bottles is still heavy, but the liability on the consumer acts as an incentive to the exercise of care and saves the vendor considerable expense. It has the merit that the careless bear the whole loss consequent on their carelessness and the careful consumer is not called upon to share that loss. Payment by tokens saves the time of the roundsman, both on his rounds and when making his returns. It also saves a considerable amount of labour in the office, enabling the staff to be much smaller than is customary in businesses of a comparable size, and it eliminates bad debts. The tokens are sold by retail agencies, to whom the generous allowance of 2½ per cent. on all tokens sold is allowed.

APPENDIX 23

ROYAL COMMISSION ON MILK

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SURVEY OF CREAMERY OPERATIONS
LOCATED IN THE PROVINCE OF ONTARIO

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(The above exhibits relate to the fiscal year next preceding October 1st, 1946)

The Honourable Justice Dalton Wells,
Commissioner,
Royal Commission on Milk.

Accountants' Report
Survey of creamery operations
Located in the Province of Ontario

Sir:

We have completed our survey on the above subject and now have the pleasure to submit our report thereon.

During the time this survey was in progress certain price control measures were relaxed, certain subsidies terminated and appreciable price increases authorized, all affecting the relative positions of the producers and processors as well as the profit margins of various products, particularly creamery butter, cheese and evaporated milk.

The effect of these measures on the operating results of the creamery industry should be favourable but it cannot be accurately determined until a sufficient period of time has elapsed to permit of reliable data being assembled.

Assignment, approach and procedure

Having regard to the provisions of the Order-in-Council dated October 1st, 1946, and in accordance with your subsequent instructions, we were required to investigate and report on the operations of creameries located in the Province of Ontario with particular regard to costs, prices, price spreads, methods of financing, and methods of management.

Such a comprehensive survey required preliminary planning, and it is thought that reference to a few of the more important points, which came to our notice, relating to the creamery industry as a whole, might be of assistance in arriving at a proper assessment of this report, and facilitate your final conclusions.

Industry background:

According to information furnished us by the Ontario Creamery Association, there are approximately 279 licensed creameries operating in the Province of Ontario of which 220 are members of the trade organization known as the Ontario Creamery Association. Of these, only 47 concentrate on the production of creamery butter, the remaining 232 concerns engaging in the processing and distribution of fluid milk and cream, cheese, ice cream, powdered milk and other milk products. Some also trade in poultry, eggs, and other produce.

A number of creameries are operated as cooperative businesses, while others are controlled or owned by ice cream and chocolate manufacturers, distributors of fluid milk and dairy products, packing houses, and processors of canned foods but the majority are operated either as proprietory businesses or partnerships, primarily for the processing and sale of creamery butter to meet domestic consumer requirements.

The peak in creamery butter production was reached in 1939 when 88 million pounds were produced in Ontario. Since then there has been a progressive decline, 1946 production representing but 79% of that for 1939.

Production of creamery butter in the year 1946 totalled 68,785,800 pounds, a reduction of 11.2% from 1945, and accounted for 36.92% of the total estimated whole milk production of the Province, aggregating 4,361,584,600 pounds. In this regard, the particulars shown in table 1, which follows, may be of interest:

TABLE I

Summary of allocation of estimated whole milk Production in the province of Ontario for the year 1946

	Production	1946 Estimated pounds of whole milk	% of total	1945 % of total
Creamery Butter	68,785,800 lbs.	1,610,275,600	36.92	38.47
Factory Cheese	91,978,000 lbs.	1,030,153,600	23.62	26.94
Fluid Milk	467,736,000 qts.	1,206,758,900	27.67	23.69
Fluid Cream	13,519,000 qts.	148,709,000	3.41	2.89
Condensed Whole Milk	14,765,700 lbs.	33,665,800	.77	.77
Evaporated Milk	98,063,700 lbs.	215,740,100	4.95	4.83
Powdered Whole Milk	14,535,200 lbs.	116,281,600	2.66	2.41
		4,361,584,600	100.00	100.00

Taking an average wholesale price of 39c per pound, a total dollar volume for 1946 of approximately twenty-seven million dollars is arrived at for creamery butter alone. Statistics show that for the year 1946, 4,500,400 pounds of butter were exported from Canada at an average price of 44.51

cents per pound for a total of $2,003,302 as against 5,497,900 pounds in 1945 but there are no official statistics maintained by either the Dominion or Provincial authorities which show the proportion of such exports produced in the Province of Ontario. The figures shown in this report therefore relate to both domestic and export sales.

For the year 1946 creamery butter production for Ontario approximated 25% of the total for the entire Dominion.

Geographically, the bulk of the creamery industry is located in that section of the Province west of Toronto. A number are located in the eastern portion of the Province, in the Ottawa Valley and St. Lawrence River sectors, and a few in the central and northern parts of the Province.

The exact number of personnel employed by, or connected with, the industry may approximate 2,500.

Unlike the fluid milk distributing trade, there does not appear to exist any establishments of sufficient magnitude, in relation to others, to occupy a dominant position or have a leading influence within the industry.

In considering the operations of creameries regard should be given to the relatively low proportion of controllable expenses entering into the total cost, and the high proportion of material cost.

Approach and procedure:

Under date of December 7, 1946, a circular letter was mailed to 197 selected creameries throughout the Province, requesting them to submit a copy of their auditor's unabridged report, with certified financial statement, including assets and liabilities, trading or operating and profit and loss statement, for the fiscal year next preceding October 1, 1946. In the event that auditors were not engaged, the operators were asked to submit their own statements. In addition, they were asked to forward an estimate of net profit for their current fiscal year, before provision for income and excess profits taxes, the information to be lodged with the Commission not later than December 17, 1946.

Unfortunately, some concerns were under the impression that the Commission's enquiry did not embrace creamery operations. The Ontario Creamery Association was contacted, and it undertook to circularize the industry so that finally, by February, 1947, a sufficiently satisfactory response was recorded enabling us to proceed with our tabulations. In registering the submissions code numbers were employed to ensure privacy and facilitate handling.

The financial statements were first sorted into three geographical areas, viz., the western and southern section of the Province, the central and northern area, and then the eastern. The returns were then tabulated as to type of business, i.e., proprietory or incorporated company, sales volume, net profits (before provision for income and excess profits taxes), capital employed, fixed assets, investments, etc. A further listing was made according to sales ranges of the individual concerns. The estimates of net profits for the current fiscal year were also tabulated.

It was following a review of these financial statements and our analyses and tabulations that a decision was made to send a form of questionnaire to a representive cross-section of the industry with a view to obtaining more detailed accounting and statistical data for the purposes of this report. The questionnaire was the same as was used for the survey of fluid milk distributors, since the time element was important and it was considered the various schedules were conviently adaptable to the creamery trade.

Following are our observations and findings on both the financial statements and questionnaires submitted to us.

Review and tabulation of financial statements showing overall operating results:

Of the 197 concerns from whom financial data was requested, 142 submitted statements which we were able to include in our tabulations. The remaining 55 were excluded for various reasons, chiefly on account of insufficient detail.

Of the 142 recorded, 41 are incorporated companies. Geographically 71 relate to the western and southern portion of the Province, 50 to the central and northern area, and 21 to the eastern area, 44 counties and districts being represented.

Our review of the financial statements, relating to proprietory concerns in particular, disclosed wide variance between individual businesses in the matter of proprietors' and partners' salaries. In order to properly determine the earnings of individual concerns and establish a comparable basis in this regard, it was necessary for us to adjust the reported profits in many instances, and apply a salary charge in accordance with a predetermined scale developed by us. Thus, so far as this item of expense is concerned, all proprietory and partnership businesses were placed on a uniform basis. No other adjustments were made by us to the reported net profits, which were after charging interest on borrowed monies.

We have not included in our tabulations the operating results of creameries owned or controlled by chocolate and ice cream manufacturers, packers and canned food processors, it being considered that the Royal Commission was primarily interested in the operations of independents. The majority show earnings ranging from less than 1% of sales to more than 6% while some show operating losses.

Observations regarding financial statements and questionnaires:

The financial statements submitted disclosed a lack of uniformity in accounting practice, and suggested a tendency on the part of the smaller businesses to be satisfied with statements which gave little consideration as to their being informative from an operating or administrative viewpoint or not. In only a few instances were comparative figures or percentages shown. The great majority of statements dealt only with the overall position, profit margins by products being given in only a few instances.

The response to the form of questionnaire was helpful although a number were incomplete in one particular or another, indicating that the accounting and statistical records in general were not as comprehensive as they should be. As mentioned, we did not prepare a separate questionnaire for the creameries, but used the same form as for the fluid milk distributors and this may have some bearing on the matter.

The foregoing broadly covers the approach to the problem and the procedures followed, although reference might be made to the considerable volume of correspondence, both inward and outward, and the consultation which became necessary in order to obtain as complete and reliable data as possible with the minimum delay. It will be appreciated that our survey occurred at a most inopportune time when most businesses were preoccupied with the closing of their books of account for the fiscal year and later the preparation of income tax returns. Thus, a certain amount of correspondence and delay was inevitable.

Overall operating results
for the fiscal year next preceding October 1, 1946

Exhibit (a), attached, summarizes the overall operating results of the 142 establishments included in our tabulations, 41 of which are incorporated companies and 101 proprietory or partnership businesses.

It will be noted that the net profits (before taxes) from the sale of all products totalled $460,919 and equalled 1.43% of sales and 13.29% of capital employed, the latter being calculated substantially in accordance with the provisions of the Dominion excess profits tax act.

The rate of earnings of the creameries located in the central and northern sections of the Province are higher than elsewhere. The western section, where most of the creameries are located, being second, and the eastern, lowest. This earnings comparison by areas is substantiated by the questionnaires returned to us.

The profit figures shown are as reported by the concerns themselves, or their auditors, except where adjustment in respect of proprietors' or partners' salaries was found necessary.

For all practical purposes the earnings rates given may be accepted for the industry as a whole as other tabulations and computations made by us show only a fractional variance. Furthermore, a recapitulation of the questionnaires received from a representative cross-section of the industry shows net profits (before taxes) of 1.36% of sales, a difference of only .07 of one per cent.

If the rate of 1.43% is applied on the creamery butter sales of the industry for the calendar year 1946, which have been estimated at $27,000,000, the net profit would amount to $386,100 which, compared with the amount of

$460,919 shown as the overall profits of 142 concerns, clearly indicates that the creamery industry produces large quantities of products other than creamery butter. Without more information than is presently available to us, it is not possible to give authentic figures regarding overall sales of all products of the industry, but from such data as we have developed, it would appear that total sales, including both domestic and export, for the fiscal year immediately preceding October 1, 1946, might approximate fifty million dollars for the entire Province. Predicated on such figure, creamery butter would represent about 54% of the total dollar sales.

On the assumption that the foregoing estimate of total dollar sales is reasonably correct, and based on the unit costs of butter as given later in this report, we have developed the following summary:

TABLE 2

Summary of estimated operating results
of creameries located in Ontario for the
fiscal year next preceding October 1, 1946

	Sales	Net profits (before taxes)	% of sales
Creamery butter	$27,000,000	$340,200	1.26
Other products	23,000,000	374,800	1.63
Totals	$50,000,000	$715,000	1.43

Having regard to the amount of capital employed as shown in exhibit (a) it may well be that the capital employed for the industry as a whole, as calculated substantially in accordance with the provisions of the Dominion excess profits tax act, might approximate $4,500,000.

Although the ratio of net profits to sales may seem low in comparison with certain other processing or distributive trades, the return on capital employed is, we believe, eminently satisfactory at 13%. We might also mention that since the raw material cost represents approximately 85% of selling price, the return in relation to the processors' efforts and expenditures would not seem inadequate.

Classification of businesses by sales volume:

As regards exhibit (b) (tabulation of sales groupings), it will be noted that the percentages of net profits to sales vary considerably.

We would direct attention to the downward trend of group 3 in relation to group 2, also the relative uniformity in the rate of earnings of the concerns enjoying annual sales in excess of $100,000 per annum, both of which conform with our findings in regard to distributors of fluid milk.

Regarding individual operations, only 75% to 80% of the independent creameries in the Province appear to have operated at a profit during the fiscal year next preceding October 1st, 1946.

Operating losses of individual businesses:

Of the 142 businesses included in our tabulations, 33 or 23% incurred losses. This proportion is applicable to each of the three areas indicating that perhaps one out of every four or five creameries throughout the Province operated at a loss during the fiscal year next preceding October 1st, 1946.

Individual losses ranged from $59 to $7,781, the 33 concerns incurring and aggregate loss of $59,302 as shown hereunder.

TABLE 3

Summary of 33 concerns showing operating losses for the fiscal year next preceding October 1st, 1946

Area	Sales	Loss	% of sales	Number of concerns
Western	$2,760,941	$36,363	1.32	16
Central	1,731,936	14,404	.89	12
Eastern	1,055,725	8,535	.81	5
Combined	$5,548,602	$59,302	1.07	33

Only twelve concerns relate to the three sales groupings up to $100,000 per annum. Ten concerns, each with sales volumes of between $100,000 and $200,000 per annum, incurred losses and eleven in the next group, ranging from $200,000 to $500,000 per annum.

These twenty-one concerns in the two highest categories show an aggregate loss of $42,636 accounting for 72% of the total. This suggests that the adverse results may not be wholly attributable to inefficient operation but perhaps a basic condition which has existed within the industry in recent years, particularly during the period that wartime controls were in effect.

Were the losses and related sales of the 33 concerns eliminated from exhibit (b), net profits for the remaining 109 businesses (before taxes) would aggregate $520,221, which calculated on the related sales total of $26,795,981 would show earnings of 1.94% of sales for the 109 profitable operations.

Breakdown of sales revenue:

Since 1939 there has been a definite movement to develop sales of products other than creamery butter, although wartime controls may be partly responsible for this development. In any event the overall dollar sales have almost doubled, yet the production of creamery butter at the close of 1946 showed a reduction of 21% from the 1939 level.

The output of condensed and powdered whole milk has increased twofold since 1939 and it may be that these two products are mainly responsible for the increase in dollar sales of the creamery industry.

From the tabulation of questionnaires indicating an average overall net profit margin of 1.36% of sales, we have prepared the following summary. The figures shown have been developed from returns which provide a representative cross-section of creameries located in Ontario and which engage in combined operations, processing fluid milk, cream, and other products in addition to creamery butter.

TABLE 4

Breakdown of overall sales revenue from all products fiscal year next preceding October 1st, 1946

	% of sales	% of total cost
Sales	100.00	
Cost of:		
Materials and ingredients (including haulage)	87.63	88.84
Processing	7.63	7.74
Selling and delivery	.71	.72
Administrative and general expense	2.67	2.70
Total cost	98.64	100.00
Net profit (before taxes)	1.36	
	100.00	

The above shows that 88.84% of the total cost of all products is represented by materials and ingredients. Of the remaining 11.16% only part can be said to be controllable from the processors viewpoint, as there are certain fixed or semi-fixed charges, such as, depreciation, insurance, light, heat, business and property taxes, etc., over which the processor has little effectual control.

Under such conditions the essentiality of volume production and a high standard of operating efficiency is evident, if a reasonable profit is to be assured. A breakdown in the flow of production or a major repair cost is sufficient to seriously reduce profits, if not to eliminate them.

An alternative breakdown by the various elements of cost in relation to overall sales revenue is given in table 5 which follows:

TABLE 5

Breakdown of total sales revenue by elements of cost—Fiscal year next preceding October 1st, 1946

	% of sales
Sales	100.00
Materials—Raw materials, ingredients	85.98
Haulage to creamery	1.65
	87.63
Containers and packages	.65
Material cost	88.28
Wages—Production	4.48
Selling and delivery	.03
Administrative and general	1.77
Labour cost	6.28
Facilities—Repairs	.70
Depreciation	.84
Services, etc.	2.54
Facilities cost	4.08
Total cost	98.64
Net profit (before taxes)	1.36
	100.00

Labour is the most important item of controllable expense. The charges for repairs and provision for depreciation are not considered unreasonable. the latter representing but 6% (approximately) of original cost of plant and machinery. Of the services cost shown at 2.54% of sales revenue, the most important items included therein are light, heat, and power, municipal and property taxes. telephone and general expenses.

Costs and profit margins
creamery butter
for the fiscal year next preceding October 1, 1946.

We give below a breakdown of the costs of manufacturing creamery butter as disclosed by a representative group of creameries selling through both wholesale and retail outlets. Being average figures they should be regarded as a standard of measurement or comparison for general application only, as the selling prices and proportions of the different grades of butter and the various elements of cost show appreciable differences as between the different localities and individual creameries.

TABLE 6

Manufacturing cost of creamery butter
for the fiscal year next preceding October 1, 1946.

	%	Cents Per Pound
Sales	100.00	35.25
Cost of:		
Churning cream and ingredients	82.51	29.09
Hauling	1.80	.63
Containers and packages	1.38	.49
Material cost	85.69	30.21

Cost of:		
Processing, labour	6.05	2.13
Selling, administrative and general salaries	1.85	.65
Labour cost	7.90	2.78
Cost of:		
Repairs	85	.30
Depreciation	.90	.32
Facilities	3.40	1.20
Services cost	5.15	1.82
Total cost	98.74	34.81
Net profit (before taxes)	1.26	.44

The costs and selling prices of the three largest distributors of fluid milk, who also produce large quantities of butter, are very different to the above. The selling prices of the three concerns ranged from 32 cents to 41½ cents per pound in 1945 and 1946. Two of the concerns reported losses ranging from 2.67% of sales or .84 of one cent per pound to 4.13% of sales or 1.63 cents per pound. The third, which sold at the highest price of the three, realized a profit.

The combined butter sales of these three concerns alone exceed $3,500,000 per annum, or 15% of total creamery butter sales, the great proportion of which is sold in the metropolitan and urban centres. The extent to which such sales may affect the operating results of producers of creamery butter is difficult to determine. However, the butter production of the larger fluid milk distributors, packing houses and others is in direct competition with the creamery industry.

Since 1939 the purchase prices of sweet cream, churning cream, and whey cream, have advanced substantially, the first two mentioned increasing more than 50%, and whey cream in excess of 60%. When it is considered that the raw material cost to the creamery operator approximates 85% of his selling price, the essential nature of the various types of produce demanded that some relief be extended the industry by way of increased selling prices or subsidies.

Financial Position

The questionnaires indicate that, in terms of dollars, the overall sales volume of creameries, including all products, has almost doubled since 1939, while net profits (before taxes) for the fiscal year next preceding October 1, 1946, are slightly less than in 1939. Substantial sums have been expended on improvements and additions to plant machinery and equipment, yet the working capital position has not deteriorated.

The following summary provides an accounting of funds over the six years 1940 to 1945 inclusive, in respect of a representative group of creamery operations. It provides an indication of the financial policy followed by the creamery industry in recent years.

Net profits 1940 to 1945, inclusive	$222,695	
Reserved for depreciation	139,707	
Total to be accounted for	$362,402	
Disbursed as follows:		% of total
Expended on improvements and additions to plant machinery and equipment	$164,369	45.36
Increases in accounts receivable, inventories and investments	191,958	52.97
Withdrawn for income and excess profits taxes	77,943	21.51
Withdrawn for drawings, dividends and surplus adjustments	91,710	25.30
Deduct	$525,980	145.14
Increase in bank loans and current liabilities	163,578	45.14
Total as above	$362,402	100.00

To meet the increased demand for creamery produce in recent years, improvements and additions to manufacturing facilities were necessarily involved. The expenditures since 1939 represent about 50% of the gross value of fixed assets for the group as at the close of the 1939 fiscal year, and exceed the total amount reserved for depreciation during the six year period 1940 to 1945. Our calculations show that the present net book value of plant, machinery and equipment for the group is less than 50% of original cost which is, of course, substantially less than replacement.

The rate of inventory turnover varies considerably between seasons. As a whole it is thought that the industry may average a rate of 15 to 20 times per annum. Accounts receivable are an important item in the financial position, and in total, may approximate the value of inventories. They are, however, in low ratio to the industries' dollar sales.

The foregoing indicates that the investment in fixed assets and the working capital requirements of the industry are not large in relation to its sales volume and, at the rate of earnings maintained in recent years, it would appear that the industry is capable of earning sufficient profits to equal the entire amount of its invested capital in a period of ten years or less. Information extracted by us from financial statements indicates that the industry may have one million dollars of outside investments, principally in Dominion of Canada bonds, and that mortgages, notes, and other long term indebtedness may approach two million dollars.

Having regard to the essential character of the industry's production, the element of risk is not a serious factor and this should not be overlooked in considering the rate of earnings.

A review of the foregoing leads to the conclusion that the plant, equipment, and manufacturing facilities of the industry have been well maintained and that financially the industry, as a whole, is in a reasonably sound position, showing little evidence of impairment over recent years.

Selling prices—creamery butter

In 1939 the average wholesale price at Toronto approximated 24 cents per pound. By the close of 1941 the price had advanced to 34½ cents and this price level was largely maintained until April, 1946, when the price was increased to 40 cents.

On April 30, 1947, the Dominion government subsidy of 10 cents per pound of butterfat (equal to 8½ cents per pound of butter) was terminated and the following day an increase of 10 cents per pound was authorized, bringing the Toronto price up to 48½ cents. At the time of this report ceiling prices have been removed and the prevailing market price is 51½ cents per pound.

Although, as we have shown, wholesale prices increased approximately 70% from 1939 to the close of 1946 and by 114% up to the time of this report, it must be remembered that the costs of raw materials, labour and operating supplies have also advanced very considerably. Of the 10 cents increase in May, 1947, 8½ cents went to replace the producer subsidy, the industry benefiting by only 1½ cents per pound or 15% of total.

Other price increases authorized on May 1, 1947, which should benefit the creamery industry, include 2 cents per pound on dairy and whey butter, 3 cents per pound on cheddar cheese (at manufacturers level) and 30 cents per case of evaporated milk, although it should be mentioned that the greater part of such increases reverted to the producer to compensate for loss of subsidy.

From the information before us, we are of the opinion that during the years 1940 to 1945 inclusive, the adjustments in selling prices of creamery butter, also the subsidies, did not permit the recovery of increased costs of production in their entirety, as and when they were incurred. The selling price increases in 1946 and of May, 1947, combined with the termination of butter rationing and price controls should, however, be of considerable benefit to the creamery operators.

Sufficient time has not elapsed to accurately gauge the effect on earnings of the last price increase referred to, but we believe the present price is adequate under existing conditions and that profit margins on creamery butter may now be reasonably attractive.

Diversification of Products:

We have found that those concerns engaged in combined operations enjoy an improved margin of profit. An analysis of financial statements and questionnaires relating to 26 such concerns shows that the combined net profit (before taxes) for the fiscal year next preceding October 1, 1946, represented 1.97% of overall sales or 50% more than the overall rate for butter producers only. Of the 26 establishments, 17 were located in Western Ontario, 2 in the north, 4 in the central sector and 3 in the east, so that the group may be considered as being representative geographically.

We believe that in the assembly of any statistical or financial data such concerns should be segregated and reported on separately since their influence as regards both sales and profits on the overall position of the creamery industry is considerable.

Price spreads—creamery butter

Unfortunately, only a very limited amount of data is available on this subject, due to the questionnaires not being satisfactorily completed in many instances. It is evident that the statistical records of the creameries fall short of what is desirable.

Many concerns do not maintain any quantity of records for either purchases or sales, others maintain one, but not the other. Where quantities are available the dollar value is occasionally missing, which renders the submission useless for the purpose of determining price spreads. Very few concerns appear to record separately the quantities and value of the various grades of butter sold through retail outlets as distinct from brokers and wholesalers. If accurate costing and proper management control is to be exercised, such data is essential.

We can, therefore, only provide a general indication such as shown in table 6, wherein the average cost of butterfat, salt and other ingredients for the fiscal year next preceding October 1, 1946, is shown at 29.09 cents per pound against a selling price of 35.25 cents resulting in a spread of 6.16 cents per pound equal to a gross margin of 21.24% on cost.

Having regard to the increase in selling price authorized in May last, it is considered that this spread may have increased by about one cent per pound after allowing for such increased costs as may have occurred since the latter part of 1946, so that creameries may presently be operating on a spread of 7½ cents per pound.

As a matter of interest and as a general indication we might mention that the usual brokerage commission is ¼ of one cent per pound plus storage and other charges and that the retail trade may average a gross spread of 2½ cents per pound the year round.

Sales outlets

The overall average price spread is influenced by several factors including the proportion of each grade to total and the quantities sold through brokers, wholesalers, direct retail and consumer outlets. Some creameries do little, if any, direct retail and consumer sales (or "print" trade as it is sometimes called), others do substantial volume. Some deal exclusively through brokers and others through wholesalers. There is no general marketing policy followed by the industry, each creamery pursues its own course, having regard to local conditions and other considerations.

We understand that a fair proportion of the creamery butter production is marketed through brokers, each of whom has his own clientele amongst both the butter producers and buyers. As agents they operate on a commission basis, selling principally to the wholesale trade. We are advised that departmental and chain stores are sold on the same basis as the wholesalers.

From the foregoing it would appear that once the butter leaves the creamery the producers have no control and little, if any, information as to the proportions sold through the different merchandising outlets.

Such marketing methods may be the most practical and efficient, but it must be admitted that it places a great responsibility on the broker and wholesaler as they can influence the price and production of both the cream producer and the butter manufacturer through the effectiveness of their merchandising policy in obtaining the maximum distribution on the most favourable terms at peak production periods and throughout the year.

Wage rates and labour costs

From the information available to us it would appear that few creameries have labour agreements with any trades union organization. The majority are operating on a 48 hour week, granting statutory holidays with pay, also one week's vacation. The present working hours are substantially less than in 1939 when 55 or more hours per week was not unusual. This, combined with the enlarged operations, leads to the conclusion that the total number of employees may have increased since 1939.

Concessions have also been made in wage rates, but the advances vary considerably between different areas and localities. Based on the questionnaires it is considered that overall, a fair indication of the average wage rate increase to creamery employees is afforded by taking a weekly rate of $20.00 for 1939 and $26.00 for 1946, indicating an increase of 30%.

The substantial increased production in powdered, evaporated and condensed milk products particularly, was of much assistance in absorbing such advance in wage rates, but with greatly increased costs of raw materials in addition, relief by way of subsidies and selling price increases became essential in order to sustain the industry.

Production capacity

According to the answers received from the questionnaires, some creameries are operating at full capacity on a single shift basis of a 48 hour week the year round, while others are producing at 50% of capacity and upward on the same basis. Although there is an appreciable seasonal element in cream and butter production, it would appear that there exists considerable surplus capacity overall, with this condition being more acute in some areas than in others.

Trends of sales and net profits
1940 *to* 1945 *inclusive*

The questionnaires returned to us disclose that profits have fluctuated considerably since 1939, in terms of dollars, although from 1940 to 1944, inclusive, there has been a progressive deterioration in the ratio of earnings to sales, the results for 1945 and 1946 showing an improvement over 1944.

It would appear that the creamery industry had its most profitable year for a considerable time in 1940 when overall net profits before taxes showed an increase of 32% over 1939 and equalled 3.14% of sales.

Overall earnings 1946

At the time of requesting financial statements relating to the fiscal year next preceding October 1, 1946, we requested that an estimate of net profits be submitted in respect of the current fiscal year, before provision for income and excess profits taxes. In some instances the actual financial statements were obtained but in the majority of cases only estimates were available, most of which related to the year ended December 31, 1946.

Some of these estimates showed marked differences as between individual businesses even where they were located in the same area, and bore no relationship to past performance. Inasmuch as only one month of the 1946 calendar year remained, we drew the inference that there are a number of the smaller creamery establishments, at least, which do not maintain up to date books of account, but operate the year round without the benefit of such guidance and are perhaps wholly dependent on their auditor for the determination of profit or loss, which may not be made until two or three months after the close of the fiscal year.

Our review of the financial statements relating to the year 1946 in conjunction with the estimates submitted and other data made available to us indicate that the overall net earnings of the creamery industry in 1946 approximate those for the fiscal year next preceding October 1, 1946.

Outlook for 1947

As regards the year 1947, official statistics show that for the quarter ended March 31, 1947, creamery butter production exceeds that for the corresponding period in 1946 by 13.71% while cheddar cheese production has declined by 4.25%.

Within recent months price controls have been relaxed on butter, cheese, and evaporated milk as well as certain other products and selling prices to brokers, wholesalers and retailers have been increased although the bulk of such advances was to compensate the producers for withdrawal of subsidies. Nevertheless, appreciable benefit should accrue to the creamery operators. We, therefore, are of the opinion that provided satisfactory sales volume is maintained at the consumer level and there seems no present indication to the contrary, also that labour costs and costs of materials and supplies do not advance unduly, the year 1947 should see a fairly substantial improvement in the overall earnings of the industry as compared with 1945 and 1946. In other words, we share the view that largely as a result of subsidies, the industry, in the Province of Ontario, has survived a trying experience, with its resources unimpaired and should now be able to consolidate and develop its position.

The industry should also benefit from the reduction of income and excess profits taxes applicable to 1947, including Provincial taxes, the net saving being approximately 23% of the rates for the fiscal year next preceding October 1, 1946.

Observations and Conclusions

It is well to emphasize the range of products manufactured and the produce traded in as well as the heterogeneous composition of the creamery industry in the Province of Ontario. Of the 279 licensed, processing and distributing establishments, the great majority are relatively small independent enterprises of a proprietory, partnership, or co-operative character, only a few incorporated companies being within the industry.

With the recent withdrawal of subsidies by the Dominion Government and the consequent increase in broker and wholesale prices of butter, cheese and evaporated milk, etc., the industry is facing a period which is vital to its own well being and that of the consuming public, as well as the producers of fluid milk and cream. Our observations are, therefore, directed at the future as well as at the past.

We believe that, despite the difficulties of dealing with a multiplicity of independent establishments, the industry is capable of maintaining itself on a sound basis in the interests of the consumer and producer alike, provided those responsible are properly and regularly informed, not only on past performance, but future trends; the latter perhaps more than the former as in recent years the industry has functioned under emergency controls so that operating conditions and results do not provide the same degree of guidance that would be afforded normally. The time, therefore, is most opportune for the industry to plan for the future.

Possible increases in sales revenue:

The recent increases in the selling prices to brokers and wholesalers on butter, cheese and evaporated milk particularly, should result in an appreciable increase in the revenues of the industry.

If the desired effect is not obtained from the present price structure, the industry is virtually at liberty to make such other price adjustments as may be necessary to achieve the desired result.

In an industry such as the creamery where profit margins are narrow and volume of production essential to profitable operation, the importance of a sound selling price structure cannot be over emphasized.

Possible savings and economies:

As about 87% of the total cost of creamery butter is represented by material cost the margin on which economies might be effected is limited especially when fixed charges, such as property taxes and depreciation, are eliminated.

The actual conversion process from cream to butter is the largest cost factor of the processor and to properly explore the possibilities of any savings in this phase of operations would first entail the assembly of detailed data far in excess of that which is available to us.

Selling and delivery expenses as well as administrative and general expenses are not important elements of cost and appear to be kept at a minimum.

In the consideration of all cost factors the seasonal element of butter production must not be overlooked.

If a determined effort is to be made to hold processors costs within certain limits the assembly of sufficient, detailed, statistical data is a prerequisite.

Statistical data:

Based on our examination of financial statements, questionnaires, and other data, we are of the opinion that a contribution to individual earnings and the profits of the industry as a whole would result from the introduction of—

(a) Standard form of accounting;
(b) Standard statistical records;
(c) Budgetary control or forecasts;
(d) The submission at regular intervals of certain financial, statistical, and forecast data, to the appropriate Provincial authority.

The adoption of the foregoing would be both reassuring and beneficial to the public, as well as the creamery operators and producers, inasmuch as it would ensure up to date information on past performance and future trends, and bring to light possible savings in costs and inefficiencies in operation which otherwise might go undetected.

On account of the large volume of production the smallest economy in costs can be significant in the overall operations.

We find that apparently only a few concerns maintain satisfactory records as to the quantities of each product sold and the selling price realized in respect of each type of sales outlet and believe that such records are vital to the industry as well as the individual operator.

We should also make reference to the desirability of allocation of raw materials according to end use. We are not aware that any system of allocation is presently employed and, while individual operators may be able to obtain their requirements, there seems the risk that overall a "short" or "long" position on butter or cheese could arise which might be to the detriment of the consuming public, the distributor, and the producer.

Whether such forecasting of available supplies is practicable or not, we are unable to say, but we suggest that the point might be worth considering as it has a definite relationship to price and supply, not only as regards butter and cheese, but other milk products. In studying the matter, allowance would have to be made for the substantial butter shipments from other provinces also the competitive production of fluid milk distributors, packing houses and other butter producers.

At the present time there are no official statistics which would indicate the quantity and value of creamery butter produced in Ontario and exported.

In general we are of the opinion that the statistical information presently available to the Provincial authorities on creamery operations should be carefully reviewed and enlarged upon. The quickest and best results would be obtained through personal visitation to a limited number of operations, followed by consultations with all interested parties, so that the desired objective can be reached with the least delay and the minimum of effort and expense.

Statistical information on the productive capacities of creamery butter plants in the various areas and principal localities might be of assistance in disclosing the balance between producers, processors and consumers.

Classification as creameries:

As with the so called fluid milk distributors we have found that certain businesses classified as creameries might better be regarded as condensaries, or fluid milk distributors, due to the volume of certain products handled. If accurate and informative statistics or reports are to be compiled, some clarification is essential. Unless this is done, inaccurate data leading to incorrect conclusions can result.

Changes in ownership:

Although we have not discovered the same activity in the creamery industry as in the fluid milk in the matter of amalgamations and absorptions, it is suggested that the regulations which may relate to the sale or acquisition of creameries be reviewed so that the provincial authorities are fully informed on all such transactions before they are actually consummated. It is known that several of the larger fluid milk distributors own or control some important creamery operations.

Marketing and merchandising:

On the principle that the producer, processor and consumer are each concerned with the welfare of the creamery industry, the operations of brokers and wholesalers responsible for the distribution of the production are of interest. We believe they are rendering a service commensurate with the margin or mark up they enjoy, but we have not made any specific investigations.

It may be that a separate study of this subject should be undertaken, for there are many complexities even though the export element is negligible and butter production almost wholly a domestic problem.

General:

Improved co-ordination between all butter producers may perhaps be to advantage. At present substantial quantities are being produced by each of the four divisions of the milk industry, viz., fluid milk distributors, condensaries, cheese manufacturers and creameries. In addition packing houses process large quantities.

Cost and selling price data is most conflicting, not only as between the four divisions but also within them, while overall there is no established marketing policy, and a decided lack of statistical data, as to sales outlets and related prices.

Such conditions require considerable clarification before any more definite recommendations could be made in the interests of the cream producers, the consuming public, and the creamery industry as a whole.

Respectfully submitted,

JOHN S. ENTWISTLE,

Accountant, Royal Commission on Milk,

Province of Ontario.

July 26th, 1947.

EXHIBIT A

ROYAL COMMISSION ON MILK

RECAPITULATION BY AREAS OF DATA EXTRACTED FROM FINANCIAL STATEMENTS SUBMITTED BY 142 CREAMERIES

Area	Concerns Tabulated	Overall Net Profit (Before Taxes)	Total Sales Amount	% Profit	Capital Employed Amount	% Profit
Western	71	$253,856	$18,611,272	1.36	$1,839,471	13.80
Central and Northern	50	167,108	9,216,687	1.81	1,115,283	14.98
Eastern	21	39,955	4,516,624	0.88	513,204	7.78
	142	$460,919	$32,344,583	1.43	$3,467,958	13.29

EXHIBIT B

ROYAL COMMISSION ON MILK

TABULATION BY AREAS OF SALES GROUPINGS OF 142 CREAMERIES

Area	Group 1. Up to $ 20,000	Group 2. $20,000 to $ 50,000	Group 3. $50,000 to $ 100,000	Group 4. $100,000 to $ 200,000	Group 5. $200,000 to $ 500,000	Group 6. Over $ 500,000	Total
Western	$	$ 116,908	$ 858,529	$ 4,090,168	$ 6,856,369	$6,689,298	$18,611,272
Central and Northern	20,241	190,141	916,390	2,758,768	3,985,540	1,345,607	9,216,687
Eastern	....	49,875	358,950	965,145	2,337,650	805,004	4,516,624
Total	$ 20,241	$ 356,924	$2,133,869	$ 7,814,081	$13,179,559	$8,839,909	$32,344,583
Average Sales per Group	$ 10,120	$ 39,656	$ 79,032	$ 147,435	$ 313,799	$ 982,212	$ 227,779
Net Profits	$ (1,961)	$ 7,408	$ 8,503	$ 133,083	$ 194,820	$ 119,066	$ 460,919
% of Sales	(9.69)	2.08	.40	1.70	1.48	1.35	1.43
% of Total	(.42)	1.61	1.84	28.87	42.27	25.83	100 00

APPENDIX 24

ROYAL COMMISSION ON MILK

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SURVEY OF CONDENSARIES
LOCATED IN THE PROVINCE OF ONTARIO

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The Honourable Justice Dalton Wells,
Commissioner,
Royal Commission on Milk.

Accountants' Report
Survey of condensaries
Located in the Province of Ontario

Sir:

In submitting this report reference should be made to the decisions of the Dominion government to terminate certain subsidies at April 30, 1947, and to remove evaporated milk from the application of ceiling prices on June 9 followed by that of the condensary operators to increase prices to jobbers or wholesalers on July 1, 1947.

These steps were taken as our investigation was approaching completion. Their affect is far reaching inasmuch as the industry has now resumed control of its operations thereby reverting to more normal trading conditions. We believe that such measures should result in improved earnings.

Assignment, approach and procedure

Assignment:

We were required to investigate and report on the operations of the condensary industry located in the Province of Ontario with particular reference to costs, prices, price spreads, methods of financing and management.

These matters are referred to in the report which follows preliminary to which we would submit a few of the more important matters relating to the industry as a whole and which it is thought might facilitate your conclusions.

Industry background:

The condensary industry in the Province of Ontario produces a wide range of goods including baby and invalid foods, pharmaceuticals, in addition to various concentrated milk products such as evaporated and condensed milk, powdered and skimmilk. Including the condensaries of the three largest fluid milk distributors it comprises some thirty separate concerns with branch establishments throughout the Province. Five of them are subsidiaries or affiliates of parent companies located in Great Britain, the United States and Canada and these five concerns are amongst the largest in the industry accounting for the greater part of its sales volume and overall profits.

A trade association, known as the Evaporated Milk Association, is active in the formation of industry policy, trade practice, and other matters. The larger condensaries are members and one or more of them are represented on the Milk Control Board as well as on other trade organizations connected with the milk industry.

The larger concerns sell throughout the Dominion and in addition engage in export trade on an appreciable scale. Domestic sales are made almost exclusively through wholesale and jobber outlets.

It has been submitted by the larger concerns that as a result of "ceiling" prices substantial losses have been incurred on domestic business, and that export sales are in the main responsible for sustaining earnings over recent years. This point is referred to later in this report.

According to the statistics of the Ontario Department of Agriculture, 8.01% of the estimated total of whole milk production of the Province of Ontario for 1945 was used in the manufacture of condensed whole milk, evaporated milk and powdered whole milk, the three principal products of condensaries. In 1946 the proportion was 8.38% comprised as follows:

TABLE 1

Whole Milk Production

	1945		1946	
	Estimated pounds of whole milk	% of total	Estimated pounds of whole milk	% of total
Condensed whole milk	36,591,000	.77	33,665,800	.77
Evaporated Milk	227,856,900	4.83	215,740,100	4.95
Powdered whole milk	113,692,000	2.41	116,281,600	2.66
	378,139,900	8.01	365,687,500	8.38

As regards evaporated milk, one case consisting of 48 16-oz. cans requires approximately 103 pounds of whole milk, so that the total of 227,856,900 pounds mentioned above is the equivalent of 2,212,203 cases. Of this total approximately 50% is produced by two concerns.

We are advised by the Dominion Bureau of Statistics that the production of concentrated milk products by manufacturers located in the Province of Ontario for the years 1945 and 1946 was as follows:

TABLE 2

Finished Goods Production

	1946		1945	
	Pounds	Amount	Pounds	Amount
Evaporated Milk	98,103,000	$ 7,515,000	103,543,000	$ 7,962,000
Condensed Milk	14,766,000	1,772,000	15,708,000	1,898,000
Powdered Whole Milk	14,813,000	5,110,000	14,552,000	4,891,000
	127,682,000	$14,397,000	133,803,000	$14,751,000
Malted Milk	1,036,000	186,000	660,000	116,000
Cream Powder	16,000	7,000	8,000	4,000
	128,734,000	$14,590,000	134,471,000	$14,871,000

Approach and procedure:

Our examination of the condensary section of the industry covered a review of the financial statements for the fiscal year immediately preceding October 1, 1946, in respect of eleven concerns located throughout the Province of Ontario.

The individual sales volumes of these concerns ranged from approximately $100,000 per annum to over $2,500,000 per annum. The group comprised seven incorporated companies and four proprietory or partnership businesses with an aggregate sales volume in excess of nine million dollars including export sales of more than one million dollars.

The principal products of the group are evaporated milk, condensed milk and powdered whole milk, in addition to skimmilk, ice cream, butter, casein, as well as a quantity of fluid milk and cream.

Following our analysis and tabulation of financial statements, correspondence and discussions ensued with certain of the more important concerns, as the result of which supplementary data was obtained. With the exception of one company, the parent corporation of which is located in the United States, the utmost cooperation was received and our enquiries fully answered.

Having regard to the foregoing, it is submitted that our findings provide a fair indication of the earnings potential of the condensary section of the milk products industry of the Province of Ontario as represented by those establishments generally considered as belonging to that category. This report does not have any reference to the milk products processed and sold by the larger fluid milk distributing concerns or creameries, although it is known that they enjoy substantial volume both in the domestic as well as in the export markets.

We should mention that some delay occurred in the preparation of this report due to officials of certain Canadian subsidiary companies being unable to furnish all of the requested data without reference to the parent organization in the United States. The response of these officials was not in all cases as prompt as the circumstances warranted and necessitated considerable consultation and correspondence.

To ensure privacy, each submission was processed under code numbers so that its identity was not disclosed.

Overall Operating Results for the Fiscal Year Next Preceding October 1, 1946

The financial statements and questionnaires submitted to us do not provide a breakdown between export and domestic sales, or detailed costs by type of product, except in one or two instances. Where an overall division was made, sharp contrasts occurred in the costs, chiefly as the result of using different bases of apportionment of indirect expenses.

With regard to evaporated and condensed milk, the two main products, the submissions by the largest manufacturers indicate a loss on domestic sales of evaporated milk and a small amount of profit on condensed milk, supporting their contention that, due to relatively low ceiling prices in the domestic market on these particular products during the years 1942 to 1946 inclusive, export sales were chiefly responsible for the profits realized.

A comparison of the financial statements of two of the larger manufacturers of evaporated milk in Ontario shows that while the selling prices are comparable, the costs per case are entirely different resulting in the larger company, which enjoys a volume three times that of the other, showing a loss of less than two cents per case on domestic sales against more than 35 cents per case for the smaller of the two.

Part of the difference of 33 cents or more per case is accounted for by the disparity in volume, and certain specific items of expense. A difference in the average laid down cost of raw milk also enters into the reconciliation. The points we wish to emphasize however are firstly, the difficulty these two large concerns would have in reaching agreement as to the prices each could afford to pay the producers for whole milk and secondly, the risk of arriving at erroneous conclusions regarding product costs and profit margins without careful study and detailed analysis.

Another point we should mention occurs when dealing with companies operating plants in one or more provinces including Ontario.

To arrive at the operating results applicable to Ontario operations apportionment of certain expenses becomes necessary. These require to be carefully enquired into and then considered in relation to the whole, having regard to the plant capacity, sales volume, and other factors. Aside from this however, company policy must not be overlooked, since it has been found that the bulk of western shipments, with their high freight rates, are made from Ontario plants, Quebec operations benefiting from the lower freight rates in the Maritimes area. In addition the Quebec plants enjoy the bulk, if not the entire benefit, of export trade.

The foregoing are important matters from the viewpoint of the producers of whole milk as well as that of the Province of Ontario and in this regard we should mention that we have been unable to obtain from either the Dominion Bureau of Statistics at Ottawa, or the Provincial authorities, any indication of the quantities of evaporated, condensed, or powdered milk, produced in Ontario and which may have been exported. We are advised that no official statistics are presently available in this regard.

Having regard to the foregoing, the overall earnings of eleven condensary plants located in the Province of Ontario are submitted as follows:

TABLE 3

Summary of operating results of eleven condensary establishments located in the Province of Ontario for the fiscal year next preceding October 1, 1946.

Sales—both export and domestic in all provinces	$10,427,379
Net Profits (before taxes)	417,446
% of net profit to sales	4.00%
Capital employed	1,191,007
% of net profit to capital employed	35.05%

Note: The amount of capital employed of $1,191,007 has been computed substantially in accordance with the provisions of the Dominion excess profits tax act.

The records of past earnings show that the profits of the group were purely nominal in 1939 whereas for the fiscal year next preceding October 1, 1946, the combined overall earnings (before taxes) exceeded four hundred thousand dollars. The net profits for that year were about double those of 1944.

The above figures are, in the main, indicative of the rate of the industry's earnings in the year 1945, which was a record year for condensary establishments.

The elimination of the combined sales and net profits of the two largest operators from the above tabulation would result in the sales total being reduced to $6,081,342 and the net profits to $210,746, representing 3.47% of sales or 22.65% of capital employed. Thus the net profits before taxes for the two large operators combined represents 4.75% of sales and 79.06% of capital employed.

Raw material costs are of course a most important cost element. Depending on the type and volume of each product to total, this element of cost may range from 20% of sales to more than 90% based on 1945 net selling prices.

Cost of containers, cartons and labels is also a major item. Varying with the product the cost may account for from two cents to more than twenty cents of every sales dollar .

Labour again is a variable factor the content per product showing considerable contrast. As a broad indication the total labour cost might range from 3% to more than 9% of sales.

Another element of cost to which we direct your attention are the charges made by the parent companies for management and technical services. Without careful study and assessment of the services rendered their propriety cannot be passed upon.

For your information we give below a condensed statement of operations for the fiscal year next preceding October 1, 1946, relating to domestic sales of evaporated milk. The figures shown are as submitted by the companies included in the tabulation.

TABLE 4

Evaporated milk (Domestic Sales only)
Condensed statement of operations
for the fiscal year next preceding October 1, 1946

Number of Cases		1,062,656	
	Amount	% of sales	Cost per case
Sales value (at plant)	$3,970,860	100.00	$3.74
Cost of raw milk	$2,366,174	59.60	$2.23
Cans, cartons, and labels	901,702	22.70	.85
Material cost	$3,267,876	82.30	$3.08

Cost of;			
Processing	390,682	9.83	.37
Selling, advertising	296,510	7.47	.28
General overhead	123,959	3.13	.11
Total cost	$4,079,027	102.73	3.84
Net loss	($108,167)	(2.73)	(.10)

The labour content per case has been estimated at approximately 20 cents per case which represents 5.35% of sales, thus the above may be broken down as follows:

	Amount	% of sales	Cost per case
Material cost	$3,267,876	82.30	$3.08
Labour cost	212,531	5.35	.20
All other expense	598,620	15.08	.56
Total cost as above	$4,079,027	102.73	$3.84

Included in table 4 are the returns of one company which show a loss on Ontario operations equal to .41% of sales, whereas the financial statements for the company as a whole show a substantial profit, indicating that operations outside the Province are by far the most profitable. This we have been unable to verify as our authority is limited to Ontario operations and the Company has not proffered any data on operations elsewhere.

As regards condensed milk, the data submitted to us indicates that in 1945 the net profit per case on domestic sales approximated $1.00 and on export sales only 66c, equivalent to 16% of selling price "at plant" for the former and 12½% for the latter. Even with these substantial profit margins overall earnings, as we have indicated, approximated only 4½% so that, according to the calculations of the companies concerned, substantial losses must have been incurred on evaporated milk sales, and appreciable profit margins made on other products, such as casein, ice cream, powdered milk and other products.

Purchase prices of materials:

Milk to be used for manufacturing purposes came under the jurisdiction of the Milk Control Board in 1934.

The chief problem has been the producer price. From 1935 to 1942 the industry operated on a price agreement between producers and processors. In 1942 no agreement could be reached and the Milk Control Board set a minimum producer price of $1.95 for 3.5% B.F.M. In 1945 the producers asked for a 10c increase to $2.05 but this was rejected by the Board as $1.95 was the prevailing price in other Provinces and it was thought that any increase at that time might lead to the processors establishing the plants elsewhere. In any event some producers were getting more than the $1.95 minimum.

According to the questionnaires the purchase price of manufactured milk has more than doubled since 1939. Depending on the locality the price in 1939 ranged from $1.13 per 100 pounds to $1.16, whereas by 1945 the average price paid by condensaries varied between $1.99 and $2.05 per 100 pounds. On October 1, 1946, the established producer price was increased to $2.35 per 100 pounds and in July 1947 a minimum price of $2.50 was authorized.

Based on information furnished in the questionnaires, concentrated skim-milk between 1939 and 1945 advanced approximately 50% from $2.00 per 100 pounds to $3.04 while churning cream advanced almost 100% per pound of butter fat. Substantial advances also occurred in the costs of containers, cartons, and labels, an important factor in condensary costs. The price of corrugated boxes advanced about 50% during the years 1939 to 1945 inclusive. Prices of cans and wrappers were more closely controlled, the increases ranging from about 10% to 25%. Barrel costs and the prices of jute bags were more than doubled while coal prices advanced appreciably.

Increased volume, combined with wartime economy measures and perhaps improved efficiency in operation were of course of assistance in countering to a considerable extent the full impact of the increased costs referred to.

Labour costs:

Taking the estimated labour cost of 20c per case of evaporated milk which from the data before us seems a reasonable figure, and applying it on the 2,212,203 cases produced in 1945, it appears that the total labour cost for evaporated milk production aggregated $442,441.

The labour cost of condensed milk is slightly more than 10% higher but the production volume is very much less, so that on an estimated output of 200,000 cases in 1945 the total labour cost for this product would approximate $45,000.

Overall it is estimated that the total payroll for all direct employees approximates eight hundred thousand dollars for the year 1945.

Since 1939 wage rates of plant employees have advanced by 50% and office salaries by about 30%. However, the effect of such rate increases in labour costs has been largely countered by the greatly increased production and improved efficiency of both employees and manufacturing processes which has evidently occurred since 1939.

Selling and advertising expenses:

These expenses in relation to sales vary considerably between different concerns. The costs range from about 1% to over 6% in some cases. Most products are sold under brand names so that a certain amount of advertising expense is necessary to maintain goodwill and ensure satisfactory sales volume.

Financial position

A comparison of individual balance sheet positions relating to the years 1939 and 1945 indicates that the condensary section of the milk products industry improved its financial position very considerably during the intervening years.

In line with the greatly increased sales volume which has occurred since 1939 in both the domestic and export markets, working capital requirements have become much larger and it would appear that a fair proportion of this additional demand has been provided for out of accumulated earnings and reserves.

Substantial monies from the same sources have also been expended on improvements and extensions to plant machinery and equipment. These additions approximate the total depreciation provision for the years 1940 to 1945 inclusive. Two instances are known where the expenditure on fixed assets during the six years is equal to approximately 70% of the total book value of plant and machinery as at the close of 1939 and about 50% of total earnings over the six year period referred to.

Funded debt, mortgages, and other long term liabilities, are not an important item in the financial structure of the industry.

Selling prices

Domestic sales:

As regards evaporated milk the net selling price at plant averaged $3.71 per case during the fiscal year next preceding October 1, 1946, for the two largest manufacturers. At that time and until just lately ceiling prices were in effect. These have now been removed and selling prices to wholesalers advanced by 28 cents per case effctive July 1, 1947. Of this increase 8 to 10 cents has been passed to the producer, the latter now receiving about $2.43 per 100 lbs. of whole milk which, with an average haulage charge of 12 cents per 100 lbs., gives a laid down cost to the condensary of approximately $2.55 per cwt.

Whether the largest manufacturers will serve the same markets in direct competition with each other remains to be seen, but in this connection certain of the larger fluid milk distributors engaged in the manufacture of milk products will no doubt have to be considered.

The average domestic selling price of evaporated milk, at plant, approximated $2.96 per case in 1939. By the close of 1946 prices had advanced 78c, the equivalent of 26% for an average price of $3.74 per case. This was sufficient to take care of the increase in the cost of raw milk which advanced from approximately $1.46 per hundred pounds in 1939 to $2.20 in 1946. On the basis of 103 pounds of raw milk per case of evaporated milk, this is the equivalent of 77c per case, so that little margin was left to offset the increased costs of cans, cartons, and labels, labour and other costs.

Export sales:

The price structure on exports is different to domestic sales. To conform with the standards of the different importing countries varying butterfat contents are required, furthermore, the packing cost is more expensive than for domestic trade. These factors account for the price variations in both evaporated and condensed milk, the average export price for the former usually being higher and that for condensed milk averaging less.

Price Spreads

Evaporated milk:

Following removal of price ceilings and controls just recently, there seems no useful purpose in submitting data relating to the years that such measures were in force.

We are informed that, currently a minimum price has been set for the month of July, 1947, by the Ontario Minister of Agriculture of $2.50 per 100 pounds of manufacturing milk and that it is the intention to review and set a price for each succeeding month until the situation becomes more clarified and stable.

On July 1, 1947, the selling price to wholesalers was advanced by 28 cents per case to give an average price at plant of $4.02. On the basis of 103 pounds of whole milk per case of evaporated milk a price spread of $1.40 per case is arrived at. This appears to be slightly less than the 1939 average spread.

Condensed Milk:

We are informed that no increase in selling price is presently contemplated by the manufacturers of condensed milk although they too are subject to the increase in the cost of whole milk referred to above, their laid down cost also approximating $2.55 per 100 pounds.

We understand that the manufacturers of condensed milk believe that present consumer prices are quite high enough and that any further advance might be detrimental to volume of sales.

Export sales of condensed milk are a very appreciable factor in the overall profit position of the industry and some apprehension has been expressed concerning the costs of Canadian manufacturers increasing to the point that the volume of foreign trade might suffer. The cost data in our possession however indicates that the profit margin on export sales of condensed milk would permit of some increase in costs without the necessity of advancing export prices. Following are the percentage of profit or loss on selling prices at plant:

	Domestic	*Export*
Evaporated milk	9% loss	5 % profit
Condensed milk	16% profiit	12½% profit

Currently the laid down cost of raw milk converted into a cost per case of condensed milk approximates $2.20 on domestic business which, based on an average selling price of $6.36 per case at plant, shows a spread of $4.16. The cost of processing condensed milk is more than double that of evaporated milk, but as we have shown the profit margin on both export and domestic sales is also substantially higher.

Marketing methods

The established practice on evaporated and condensed milk sales, so far as domestic business is concerned, is to sell on a delivered price basis through wholesalers. A 2% cash discount is allowed and invariably taken, so that in considering the net selling price at plant, allowance should be made for both freight and discount.

Due to the substantial volume of shipments to the western provinces by condensaries located in the Province of Ontario freight is an important factor. On evaporated milk the average freight charge approximates 46 cents per case so that combined with the 2% discount, representing eight cents per case, the net return at plant shows approximately 54 cents per case less than the delivered price.

Earnings for 1946:

The financial statements relating to the year 1946 show a substantial increase in the net profits of all companies over those of the fiscal year next preceding October 1, 1946.

The year 1946 saw a reduction of 10% in the dollar value of exports from Canada of whole milk powder, condensed milk and evaporated milk as compared with 1945. How much of this reduction related to Ontario is not known, as statistical records are not presently available.

Outlook for 1947:

The dollar value of Canadian exports of evaporated, condensed, and powdered milk for the first quarter of 1947 shows a reduction of 24% from the corresponding period in 1946. If this unfavourable condition is maintained throughout the current year, the total value of exports from Canada of the three products mentioned for 1947 will show a reduction of one-third from the 1945 levels. As previously stated the amount which might be applicable to Ontario cannot be estimated in the absence of statistical data.

Some improvement in the earnings of the industry may be looked for as the result of the termination of subsidies, the lifting of price controls and the increase in the price of evaporated milk to wholesalers in July, 1947, the industry having now virtually resumed control of its own affairs. The reduced scale of taxation of profits, as announced in the 1946 and 1947 budgets of the Dominion government, should also benefit the industry. Provision for profits taxes in 1947 should indicate a reduction of approximately 9.4% as compared with 1946.

With ample financial resources at its disposal we see no reason for anticipating any serious reduction in the earnings of the industry for 1947.

Trend in sales and net profits

The questionnaires reveal that both sales and net profits of the industry have, in terms of dollars, increased substantially since 1939. Sales have doubled while net profits, before taxes, have advanced on an even greater scale. The extent to which export business may have influenced earnings is difficult to determine. Its contribution in supplementing production, thereby improving the ratio of output to capacity, also its absorption of part of the overhead expenses bringing about a reduction in overall unit costs must have important bearing on profits. We have enquired into these matters but have to report that the data made available to us is not sufficient to permit any reasonably accurate assessment.

Observations and conclusions

The survey indicates that the condensary industry has expanded and strengthened its financial position very considerably since 1939. Production has increased appreciably while, in terms of dollars, sales have doubled and net profits (before taxes) have increased even more. For the year 1946 the return on both sales and capital can only be regarded as being eminently satisfactory from the industry viewpoint.

As regards operating results of the current year, even though a contraction has occurred in the export sales volume during the first few months of the current year, the adverse effect on overall earnings may be largely offset by the benefits resulting from the removal of price controls on certain of the main products, the recent price increase in evaporated milk and the reduced scale of profits taxation.

The industry is presently assuming command of its own affairs after several years of government control so that it is now at liberty to exercise its initiative in meeting the problems as they are anticipated. If the desired objectives may not seem attainable, corrective measures can be taken.

Possible increases in revenue:

The effect on operating results of the recent increase in the domestic wholesale price of evaporated milk cannot yet be measured. It appears unlikely that it will adversely affect volume so that, provided export sales can be maintained, sales revenues should exceed those of 1946.

We understand that no increase in the price of condensed milk is presently contemplated by the manufacturers. It remains to be seen whether present prices will continue for the remaining months of the year.

Possible savings and economies:

Without considerably more operating data than has been made available to us we feel unable to make any concrete proposals.

Most of the companies in the condensary division of the milk industry are substantial and successful businesses enjoying a high standard of managerial control and operating efficiency. The record of progress over recent years bears testimony to this. They have demonstrated their ability to overcome the problems of the past and may be depended upon to successfully cope with those of the future.

Product costs and profit margins:

Until such time as a greater degree of uniformity in accounting and costing procedures is brought about we consider that the utmost caution should be exercised in the acceptance of any product cost figures. As with other divisions of the milk industry we have found that seemingly wide disparities between different concerns can frequently be fully accounted for, or considerably narrowed or reduced by the application of the same principles of apportionment of overhead expense to each.

Statistical data:

We are of the opinion that the information presently available to the Provincial authorities regarding condensary operations is not sufficiently complete, having regard to (1) the essential character of the finished products to the public welfare; (2) the influence of the industry on producer prices and supply of whole milk for fluid and other purposes; (3) the structure of the industry, which is virtually dominated by three or four large concerns with parent companies located abroad.

It is suggested that if in the interests of the consumer public it is considered that Provincial authorities should be fully informed on past, current, and future affairs relating particularly to the fluid milk industry, the statistical data should be sufficiently comprehensive to embrace all phases of the milk industry as each section has an important bearing on fluid milk prices and supply. Such data might cover export as well as domestic business, both within the Province of Ontario and outside.

On account of the large volume of concentrated milk products manufactured by certain large processors listed as fluid milk distributors, it would seem that some reclassification is desirable to ensure complete and accurate data. This might be undertaken by the Milk Control Board and the Evaporated Milk Association in conjunction with the Ontario Milk Distributors' Association.

Omission to file brief:

The decision of the manufacturers of concentrated milk products not to submit any brief or make any direct representations to the Commission may not be of any significance. Had representations been made, however, we feel sure that our work would have been considerably facilitated.

Change in ownership:

As with other divisions of the milk industry it is suggested that full particulars of any absorptions or amalgamations both within and without the industry be furnished the appropriate Provincial authorities before consummation.

Allocation of profits between Provinces:

Where concerns have operations in other provinces or elsewhere, consideration might be given to the submission of appropriate data concerning such other operations. Such measures would seem to be in the interests of the producers and other divisions of the milk industry in Ontario as well as the consuming public.

This observation results from the reference on page 171 of this report to operations outside the Province of Ontario. The company referred to has burdened its Ontario operations with all its costly western business retaining the benefits of export trade and the domestic business carrying relatively low freight charges for its Quebec operations. Such a policy seems hardly fair to the Ontario producer if manufacturers margins are used as an argument for holding down producer prices as they may well be.

Respectfully submitted,
JOHN S. ENTWISTLE,
Accountant, Royal Commission on Milk,
Province of Ontario.

July 26th, 1947.

APPENDIX 25

The Honourable Justice Dalton Wells,
Commissioner,
Royal Commission on Milk.

Report on Cost of Whole Milk Production

General nature of enquiry:

Sir:

We have investigated the evidence and many statements and estimates of various sorts relating to cost of production submitted by a large number of individual producers as well as that supplied by Provincial and regional producers' organizations. In addition we have taken into account the independent survey of representative producers in different sections of the Province made with the assistance of five graduates of the Ontario Agricultural College. The period under review was substantially the 1946 calendar year.

Other surveys:

We have studied the results of many other investigations on this subject including:

The "Hare" Report published by the Dominion Department of Agriculture.

Cornell University Studies of Costs and Reports from Farm Enterprises, including Misner Report prepared in conjunction with the New York State College, Cornell University Agricultural Experimental Station, Department of Agriculture of Economics, Ithaca, New York.

University of Illinois Report on Cost of Producing Milk in Northern Illinois.

An Economic Study of Dairy Farms in the Province of Alberta by Howard Patterson.

The above mentioned surveys and reports included elaborate studies of costs of producing each of the dairy farm feeds, pasture costs, time and labour elements, depreciation, maintenance, replacements, bedding, inventory variations, and miscellaneous expenses. Credits, such as milk consumed on farm, manure, profits and losses on purchase and disposal of cattle were also reviewed.

Survey method:

There are a variety of methods which may be used to obtain cost information and among these are:

Estimation Method.
Farmers' Record Plan.
Detailed Accounting or Route Method.
Survey Method.

The latter method was adopted in this case as the one most likely to secure, within a reasonable degree of accuracy, the required information, and within the relatively limited period available. Other methods were found to be unsuited for the particular task of the Royal Commission.

Feeds, etc.:

There are tremendous variations in feeding methods, and in the amount, kind and value of buildings and equipment employed and the manner in which the necessary labour is performed. For example, some farmers tend to combine a relatively large amount of home grown roughage with a small quantity of cheap concentrates. Other farmers are in the position where they are obliged to reverse this practice and make substantial cash purchases of feeds, particularly concentrates, and in many instances expensive concentrates. The quality and prices of concentrates vary within a wide range.

It must be borne in mind that cost figures, which appear later in this report, relate to conditions as they existed in the year 1946 and that past experience has made it abundantly clear that special climatic and other conditions may exercise a pronounced influence on costs in any specific year. These climatic conditions virtually determine the cost of home grown feeds which normally constitute a very large part of the total net costs.

Hay:

Hay costs vary throughout the Province depending on location, yield, whether bought or home grown, costs of transporting bought hay, and also on whether the hay is of high or low protein content, etc.

Silage:

Silage costs vary from farm to farm due mainly to yield variation of corn and other silage crops. Other factors responsible are different valuations of land and silos and operations used in the technical methods employed in harvesting. While corn silage is the kind most commonly used throughout the Province, recent years have seen increasing use of other types of silage with consequent variations in silage costs. It is recognized also that irrespective of the kind of silage, its actual feeding value varies very considerably.

Pasture:

We have consulted with recognized experts on the subject of pasture costs. These vary substantially depending on whether the pasture land is improved or unimproved and whether it is natural or rough pasture. Other factors include variations in location, fencing expenses, taxes and value of land used.

Labour:

Many producers are able to rely upon their own labour and that of members of their family, whereas others are compelled to use hired help almost exclusively. In this connection it is a noteworthy fact that labour efficiency shows a pronounced variation. Labour costs vary depending upon whether hand or machine methods are used in milking, feeding, cleaning, etc., and also vary according to season of year, quantity produced, weather conditions, and many other circumstances, such as proximity to urban centres, relative scarcity of labour, proper training or lack of it, degree of efficiency, number of hours worked, different rates of wages paid and also the value of perquisites.

Depreciation on Equipment and Buildings:

Different rates of depreciation have been claimed by producers throughout the Province. After having made a study of this subject, and after having consulted recognized authorities, average annual depreciation rates of 8% have been provided for on dairy machinery and equipment and 3 1-3% on buildings.

Inventory values:

Wherever possible the variation in inventory value of cattle has been taken into consideration but in no instance, to our knowledge, has the valuation been shown in excess of cost.

Hauling:

The main cause of difference in hauling costs is the variation in the distance from market. Since nearly all milk is transported in trucks, and since all farmers within the same trucking zone pay the same trucking rate per 100 lbs., the chief reason for differences in transportation cost, as between farms, is the fact that different farmers live in different zones. Actually the major variations in transportation costs relate chiefly to producers who supply the Toronto market. Producers shipping to Toronto may live in any one of at least six zones and, therefore, pay any one of six rates per 100 lbs. of milk. However, some producers haul their own milk and consequently have somewhat different costs for that reason.

Miscellaneous expenses:—cover the many other items not enumerated in the table of costs. Included in these numerous items of costs are such items as breeding, taxes, bedding, repairs, maintenance, veterinary fees, etc.

Bedding costs:

The extent of these costs depend on whether bedding material is purchased or is obtained by using home grown straw, which cannot be effectively used for other purposes. As combine threshers are being used to an increasing extent the cost of producing straw for bedding is substantially the labour cost of collecting and hauling the straw from the fields following combining.

Milk used on farm:

The value of this varies mainly because of the different quantities retained for farm use. This in turn varies with the size of the family. The kind of calves raised is another factor and whether calves are from high class expensive cows. The tendency is to feed such calves more whole milk and for longer periods than where calves are of ordinary or grade stock. In some cases calves are sold almost immediately after birth and hence consume less milk. In other cases they are kept and sold as veal, which entails feeding whole milk for about six weeks. Again the amount of milk fed to calves depends on whether the calves are male or female. Female calves are very apt to be raised and, therefore, fed milk. Male calves are usually sold when very young.

Manure:

The value of manure varies depending on the kind or quality of feed used, the kind of crop grown after the manure is applied, the type of soil and the state of the soil at the time the manure is applied. In certain regions, e.g., in Norfolk and Haldimand Counties, considerable manure is actually sold. In such cases the value varies with the price received and this in turn depends on the intensity of demand.

Depreciation and appreciation of cattle:

This factor in cost varies with the age of the cows and whether they are still in the appreciation stage or have passed their highest producing point. It also depends on the presence or absence of the various cattle diseases. Serious disease infestation may cause even 100% depreciation. Where no disease or serious accidents occur the average herd may show appreciation rather than depreciation.

Increase and decrease in inventory:

This item varies particularly because of changes in price levels or cow values between the beginning and end of the year; because cattle may be sold or purchased during the year, and particularly because older cows may decline in value and younger cows increase in value during the year.

Cattle sales:

Costs would have been much higher during the period under review if it were not for the large number of cattle sales at the relatively high prices prevailing. This credit alone amounted to 44c per 100 lbs. of milk. In other words, had these sales not taken place, the average cost of producing milk would have been $3.63 and not $3.19, exclusive of administration allowance, as shown by the table of costs.

Production and test:

The average production of cows included in the herds covered by the survey was approximately 7,800 lbs. per annum, which is above the average for the Province. The average test was estimated at 3.45% of butterfat.

Administration allowance:

The producer is quite entitled to a return on his investment and an equitable allowance for performing his function of management, as distinct from the labour actually required to operate his farm. In our opinion a reasonable return would be approximately 15% of the average net cost over the Province or 48c per 100 lbs. of milk produced.

Costs:

Following is a table showing various elements of cost summarized from reports obtained through the limited survey made, and after taking into consideration evidence of producers appearing before the Royal Commission:

Average costs for the Province of producing milk for the fluid milk market

Concentrates	.94	
Hay	.50	
Silage	.31	
Pasture	.28	
Total Feed Costs		$2.03
Dairy Herd Labour		1.17
Depreciation		.14
Hauling		.22
Miscellaneous		.48
Gross Cost		$4.04
Credits:		
Milk used on farm	.16	
Manure	.25	
Cattle Sales Less Cattle Purchases and Inventory Adjustments	.44	
Total Credits		.85
Average Net Cost		$3.19
Administration Allowance		.48
Total Cost including Administration Allowance		$3.67

Costs by districts:

Costs in the Kenora, Dryden and North Western Ontario districts are estimated to be as follows:

Net Cost per 100 lbs.	$3.97
Administration Allowance	.48
Total cost	$4.45

Hamilton and Niagara Peninsula districts:	
Net cost per 100 lbs.	$3.47
Administration Allowance	.48
Total cost	$3.95

Costs in the Toronto area and in other parts of Ontario do not seem to vary to any great extent and are approximately as follows:

Net Cost per 100 lbs.	$3.09
Administration Allowance	.48
Total cost	$3.57

Surplus milk:

It is quite obvious that whole milk sold at prevailing surplus prices results in a loss to the producers. The price received rarely covers the bare net cost, and does not allow anything for administration or return on investment.

Concentrated milk producers and cheese milk producers:

The forgoing remarks, which apply to the production of milk for the fluid market, are generally applicable to the production of milk used for manufacturing purposes. Costs of the latter, however, are not so high for several reasons and mainly because there is not the necessity for maintaining all year round production.

Following are tables showing various elements of cost summarized from reports obtained through the limited survey made and after taking into consideration evidence of producers appearing before the Royal Commission.

Average costs for the Province of producing milk for the manufacture of concentrated milk products

Concentrates	.73	
Hay	.46	
Silage	.20	
Pasture	.24	
Total Feed Costs		$1.63
Dairy Herd Labour		.92
Depreciation		.17
Hauling		.12
Miscellaneous		.29
Gross Cost		$3.13
Credits:		
Milk used on farm	.09	
Manure	.20	
Cattle Sales Less Cattle Purchases and Inventory Adjustments	.29	
Total Credits		.58
Average Net Cost		$2.55
Adminstration Allowance		.38
Total Cost including Administration Allowance		$2.93

Average costs for the Province of producing milk for the manufacture of cheese

Concentrates	.65	
Hay	.46	
Silage	.23	
Pasture	.28	
Total Feed Costs		$1.62
Dairy Herd Labour		1.00
Depreciation		.11
Hauling		.10
Miscellaneous		.35
Gross Cost		$3.18
Credits:		
Milk used on farm	.21	
Manure	.24	
Cattle Sales Less Cattle Purchases and Inventory Adjustments	.39	
Total Credits		.84
Average Net Cost		$2.34
Administration Allowance		.35
Total Cost including Administration Allowance		$2.69

Observations and Conclusions

Every effort was put forth to secure costs of producing milk for cream production. A number of producers co-operated to the best of their ability but the estimated costs obtained through the survey showed such tremendous variations that no useful purpose could have been served by tabulating them. Little or no evidence as to costs was submitted at the hearings by individual producers, however, a brief was filed by the Ontario Cream Producers' League which was helpful.

Due to the limited information on costs presently available to us we are unable to say, with any confidence, what the average costs are for the Province. The following table is simply an estimate and nothing more:

Estimated average costs for the Province of producing milk for cream production

	(cents)	
Concentrates	55	
Hay	66	
Silage	31	
Pasture	28	
Total Feed Costs		$1.80
Labour		1.13
Depreciation		13
Hauling		10
Miscellaneous		.28
Gross Cost		$3.44
Credits:		
Milk used on farm, manure, cattle sales, Inventory adjustments, etc		1.70
Average net cost		$1.74
Administration allowance		.30
Total Cost 100 lbs. of milk		$2.04
Cost per pound of butterfat		$ .60

Necessity of Keeping Accounts

Dairy farming is a very important business. Costs and sales values have mounted. It has become too complicated and risky to carry accounting details in mind.

We are quite aware that the average farmer has little spare time and bookkeeping is difficult for him but good farm management is almost always associated with the keeping and using of a set of farm accounts and records.

It is very much in the interests of the individual producers that they keep proper cost and accounting records and a few minutes spent each day on the books approved by the Ontario Agricultural College will provide a permanent record of the transactions and operations of the entire year.

Respectfully submitted,

JOHN S. ENTWISTLE,

Accountant, Royal Commission on Milk.

Province of Ontario.

July 26th, 1947.

APPENDIX 26

ILLUSTRATION OF METHODS WHICH MAY BE USED IN CALCULATING CERTAIN MILK PRODUCTION COST ITEMS RELATING TO DEPRECIATION ON COWS, BUILDINGS, EQUIPMENT AND DIFFERENT METHODS OF LISTING MILK COST ITEMS IN GENERAL.

Methods of Calculating Depreciation on Cows

A variety of methods have been used to arrive at an annual depreciation charge for dairy cows. Among the more common of these methods are the following:

1. "The annual depreciation is computed by finding the probable difference between the cost or value of the cow when she first freshens or is purchased and the price she will bring for beef when she is discarded.

For example, if a cow is worth $125 when she first freshens, then has a useful life of 5 years, and finally brings $60 when sold for beef, the annual depreciation will be one-fifth of $65 or $13". (From Morrison Feeds and Feeding.)

2. First calculate the present-day value of the cow. Then assume that the average life of a milk cow is 5 years. Divide the value as calculated by 5 and the result is the annual depreciation. (This was the method used by J. W. Hansen in the brief submitted on behalf of the Ontario Whole Milk Producers' League.)

3. The Misner formula for depreciation:

Value of cows at beginning of year	plus	Value of cows purchased and heifers freshening for first time)	minus	(Value of cows sold, eaten or killed for which indemnity was collected including value of hides	plus	Value of cows on hand at end of year

4. The value of cows and heifers at the end of the year, and cows sold during the year, is deducted from the value of the cows and heifers on hand at the beginning of the year or purchased during the year. Any net decrease in the value of cows and heifers represents depreciation. (This was the method employed by the Royal Commission on Milk in its independent investigation of costs.)

5. Use the cow rather than the herd as the unit when finding costs. This method assumes that the production of milk and the growing of young stock are two separate enterprises. Only the cost of keeping the cows actually in the milking herd is included. In other words the cost of growing young stock to maintain the dairy herd is provided for by valuing freshening heifers at the current market price when they enter the herd.

Some Possible Methods of Calculating Depreciation on Buildings & Equipment

Method 1—Depreciation is found by dividing the present value of each piece of equipment by its probable years of usefulness. All estimates to be made by the farmers.

Method 2—Calculate depreciation at a rate of 2½ per cent of the original cost of stone, cement, or brick buildings or 5 per cent in the case of frame structures. This is the method followed by the Dominion Income Tax authorities.

In addition to the above plans, one suggestion is that the rate of depreciation permitted should be raised so as to include an allowance for *obsolescence* as well as *depreciation* proper.

FACTORS OR ITEMS IN COST

1. Feed and bedding.
2. Man labour.
3. Building charge (includes interest, taxes and depreciation on the part of the farm occupied by the cows and by the feed for the dairy herd.)
   Repairs should also be included under this item or under "miscellaneous".
4. Equipment charge (covers interest, insurance, depreciation and any taxes on milk utensils or machinery, tools, etc.)
5. Cow charge (covers depreciation, interest, taxes and mortality risk on the cows themselves.)
6. Cost of keeping the sire or bull service.
7. Miscellaneous (hauling costs, horse labour, vet. service, cow testing, association fees, etc.)

Credits to be deducted

1. value of manure
2. value of calves
3. milk consumed on farm.

(from Morrison's book "FEEDS AND FEEDING", p. 577 & 8)

COST ITEMS OR FACTORS USED IN OHIO EXPERIMENT STATION *Bulletin* 424

Concentrates:
    Corn
    Oats
    Cottonseed meal or oilmeal
    Bran and Middlings
    Other concentrates
    Total concentrates
Succulent feed (silage, roots, etc.)
Hay
Stover
Pasture
Total feed and Pasture
Straw bedding
Man labour
Building charge
Equipment charge
Interest on cows
Taxes and insurance
Depreciation on cows
Bull service
Overhead
Miscellaneous
TOTAL COST
Credits:
    Manure
    Calf
    Total Credits
NET COST

COST ITEMS INCLUDED IN OHIO EXPERIMENT STATION BUL. 424

Feed and pasture
Straw bedding
Man labour
Building charge[1]
Equipment charge
Interest on cows
Taxes and insurance
Depreciation on cows
Bull service
Other[2]

From total of above which gives gross cost, credits[3] are subtracted to obtain net cost.

[1] Equipment charges include all charges in connection with dairy equipment such as cans, pails, strainers, stable equipment and milking machines, a share of the total operating costs of water supply equipment, lighting systems and feed grinders, and a share of the total cost of operating farm automobiles and trucks used for hauling feed or trucking cows. Milk hauling costs are not included.

[2] Other costs include overhead charges, cow-testing expenses, horse work, medicines, disinfectants, veterinary services and advertising.

[3] Credits include value of milk used on farm, value of manure, value of calves and feed bags.

APPENDIX 27

WHOLE MILK PRODUCTION COSTS
IN
HAMILTON-NIAGARA DISTRICT

INTRODUCTION

In making this analysis of whole milk production costs in the Hamilton-Niagara district I have been prompted, and in a general way, guided by my own experience during the past fifteen years. Beginning in 1932 with a holding of 100 acres in the Waterdown area, since increased to 463 acres, with provision for a herd of 140 Ayrshires including some 70 milking cows, I have continuously maintained farm and dairy accounts on a much more detailed basis than I believe is common in the farm community in general. I have also consistently employed the best type of farm help available and have constantly sought and applied the advice of our field and animal husbandry experts at Guelph and Ottawa. In short, I have left little undone that I could reasonably do to operate my dairy farm in an efficient, up-to-date manner. There may be some who contend that farming in Ontario is not economically practicable on a modern, mechanized basis but this appears to me to be a policy of despair. I strongly suggest that this viewpoint, if given any official cognizance, can only result in our agricultural community becoming progressively a discounted and under-privileged section of the national economy.

The inescapable evidence of my accounts is that the production of fluid milk, at current prices to the producer and by any conventional standards of judgment, is a highly unprofitable business. I hasten to point out, however, that in the present study I have not relied on my own actual experience as to costs, except insofar as, in their more favourable aspects, they are confirmed by accepted authorities. To the extent that they are more unfavourable than accepted or published standards, and might thus reflect purely individual conditions, I have not referred to them or permitted them to influence the following analysis.

In other words, I have attempted to make an impartial, impersonal examination of the subject, based on self-evident or authoritative information, admitting my own personal experience only as general background knowledge and not as substantiating data.

THE FARM

FARM PRODUCTION

In the study of milk production in Ontario made by H. R. Hare, results of which were published in March, 1942, by the Dominion Department of Agriculture, the typical Hamilton-Niagara district dairy farm of the survey was computed to be of 136 acres paying taxes of $188 per annum. I have indicated on an attached sketch an allocation of this typical acreage designed to provide a balanced operation in any particular year for milk production purposes. This hypothetical farm constitutes the basis or background of the following analysis.

According to the Hare Report, based on the average of the years 1936-39, yields per acre and total production of the typical farm can be reasonably computed as:—

	Tons per acre	"The Farm" acreage	Tons farm product
Oats (35.34 bus. per acre)	.6185	42	26
Silage	9.33	10	93.3
Alfalfa	1.8	15	27
Timothy and Clover	1.54	15	23

FARM EXPENSE

Hired Labour

On the basis of a Man Work Unit (M.W.U.) of 1 man working 10 hours the farm labour required to secure the above farm production will be:—

Type Work	M.W.U's. per Acre	No. acres	Total
Grain	2	42	82
Silage	5	10	50
Alfalfa	2	15	30
Mixed Hay	1	15	15
Pasture	.2	39	8
Fences, etc.	...	..	10
			195 M.W.U's.

Allowing 250 M.W.U.'s per man per annum this will require .78 or, for convenience, .8 man per year.

Presuming the man to be married and living in a farm cottage the hired labour expense chargeable to Farm Account can then be tabulated as:—

Wage per month	$105.00	
House rental per month	12.00	
Light and power	4.00	
Fuel (3 tons coal and wood)	6.00	
Milk (2 qts. per day at 7c)	4.20	
	131.20	
	12 months	
	$1,574.40	or 63c.
80% to Farm Account	$1,259.50	per hr.
Workmen's Compensation	26.00	
Total hired labour expense (Farm Account)	$1,285.50	

Labour Note

Some further evidence substantiating the foregoing farm hired labour expense of $1,285.50 may be appropriate.

Assuming that a single instead of a married man is employed:—

Wage per month	$65.00
Board	32.50
Perquisites (room, milk, add'l. heat, power. light)	7.50
Per month	$105.00
	12 months
Per year	$1,260.00
At 250 M.W.U's. per year	2500 hours
Rate per hour	50½c

Most farmers, and certainly Hamilton-Niagara district farmers, are in competition with the cities for labour. The current rate for the lowest category plant labour (sweepers, etc.) is 65 cents per hour and this is now in course of increase to 75 cents-80 cents as a result of strike settlements. Farm trained help can invariably secure employment in higher labour grades commanding still higher rates of pay. Furthermore, city employment offers the powerful inducements of paid vacations and holidays, a legal 48 hour week, unemployment insurance and other advantages so far denied to farm labour.

In the matter of farm working hours, I recently allowed 300 M.W.U.'s per annum per man in an analysis of milk production costs submitted to a leading economist of the Dominion Department of Agriculture. He considered this to be high and indicated 250 M.W.U.'s to be reasonable and proper. H. R. Hare ("Farm Business Management") states, however, that the normal labour allowances of M.W.U.'s per acre are for Direct Labour only and do not provide for such Indirect Labour as care of horses, maintenance of buildings, implements, and machinery, upkeep of drains, bridges, and fences, manure haulage, snow removal and the many other miscellaneous operations essential to good farm practice.

On my own dairy farm, which I have no reason to believe exceptional in this respect, the men start work at 5.15 a.m. and hope to quit at 6 p.m.:—

Working Day (2 hours for meals)	10 hrs. 45 min.
6 days	64 hrs. 30 min.
Sunday	3 hrs. 30 min.
Week	68 hrs.
Year	3536 hrs.
or	353.6 M.W.U.'s

On the basis of this actual experience:—

Calculated single man rate of 50½ cents reduces to 36 cents per hour actual.

Calculated married man rate of 63 cents reduces to 44½ cents per hour actual.

In face of city competition offering approximately double these rates, the difficulty and, in the case of single men, the virtual impossibility of retaining competent farm help is not far to seek. If the bare living requirements, to say nothing of the wellbeing of the farm worker are to be given any consideration whatever in the determination of farm production costs and consumer prices I submit that a single man base rate of 60 cents per hour or $85.00 per month is minimal and necessary to secure and hold his services. As to the married man, the working year of 250 M.W.U's and hourly wage rate of 63 cents used in determining the foregoing typical farm labour expense are equally minimal and essential.

It is a reasonable assumption that the present pattern of 13c per hour increase for industrial workers will shortly have to be reflected in farm labour rates to preserve some semblance of balance between urban and rural workers. Our married man rate of 63c per hour in that event would have to be increased to 76c per hour for 2500 hours per annum.

In view of such hourly rates what is to be said of farm rates of the order of "17.4c per hour", "20c per hour", "30c per hour", "$3.00 per day", etc., invariably appearing in official analyses of farm costs? (e.g. H. R. Hare: "The Dairy Farm Business in Ontario"; Department of Agriculture; 1940: W. Kalbfleisch; "Cost of Operating Farm Machinery in Eastern Canada"; Publication 750, Department of Agriculture; 1944.) The answer obviously is that these rates, so far as they have any basis in reality, represent unfair and depressed farm labour conditions relative to city labour, and for general farm cost analysis purposes propagate misleading conclusions by obscuring the *real* costs of farm labour.

FERTILIZER AND MANURE

Disregarding the recommended requirements for improvement or maintenance of permanent pasture (400 lbs., per acre every 3 years), the costs of commercial and natural fertilizer to new seeding only for the 136 acre farm may be stated as follows:

Grain 42 acres at 200 lbs	4.2 tons	
Corn 10 acres at 200 lbs	1 ton	
	5.2 tons at	$35.00—$187.20
Stable excretion per cow—8 tons per annum (Reinforced with stable phosphate)—$2.00 per ton.		
Assuming 25 cow units 25 x 8 x $2		400.00
Total		587.20

(Note: Natural fertilizer cost of $400.00 later credited to Dairy Account).

IMPLEMENTS AND MACHINERY TO FARM ACCOUNT

Using team and tractor the estimated costs of machinery operation reasonably necessary to work the 136 acre farm with the indicated crop acreages, are tabulated below. These are derived from Publication No. 750, Department of Agriculture; "Costs of Operating Farm Machinery in Eastern Canada"; W. Kalbfleisch; 1944. and subsequent correspondence with the same source:—

Tillage	Approx. Cost New	Years to Obsolence or Discard	Tons or Acres Days per Year	Est. Cost per Acre	Cost per Year
Horses (2) (see tabulation below)	250	10	....	....	$373.76
Tractor (2 plow)	900	15	60	3.29	197.90
Disc Harrow	172	15	60	.26	15.60
Cultivator	160	15	60	.30	18.00
Tractor Plow (2 furrow)	130	15	40	.44	17.60
Walking Plow	25	22	20	.24	4.80
Roller	120	25	40	.20	8.00
Harrow	29	25	50	.05	2.50
Seeding					
Grain Drill	210	20	40	.49	19.60
Harvesting					
Mower (horse)	126	20	40	.31	12.40
Rake (side)	172	20	40	.33	13.20
Hay Loader	218	20	100	.21	21.00
Corn Binder (power & loader)	400	15	10	4.14	41.40
Combine	500	15	40	1.52	60.80
General					
Manure Spreader	200	18	200	10	20.00
Wagon (two)	220	25	80	12	9.60
Racks (two)	75	25	40	10	4.00
Sleigh	85	25	20	20	4.00
Fanning Mill	55	25	2	1.85	3.70
Misc. & Spare Parts	100				10.00
	$4147				853.86
		Fire & Liability Ins			46.14
					$900.00

Operating cost per acre (farm operation only) 136 acres $6.60
Investment per acre (farm operation only) 136 acres 30.50

Note:

Horses (Basis: Publication No. 750. Department of Agriculture;)
(W. Kalbfleisch; 1944 and incremented prices.)

Feed Cost		
Grain 2500 lbs. at 2c per lb.	$50.00	
Hay 3 tons at $18 per ton	54.00	
Pasture and Fencing 3 acres at $10	30.00	
Bedding ½ ton at $6.00	3.00	
		$137.00
Man Labour 75 man hours at 50c		$37.50
Fixed Costs		
Depreciation 10% on $125 valuation	12.50	
Interst 4% on one half the value	2.50	
Buildings	6.00	
Shoeing	2.75	
Veterinarian	.63	
		$24.38
Harness—Cost per year		5.00
Total Costs		$203.88
Credits—Manure 8 tons at $2.00		16.00
Net cost per horse per year		$186.88
Net cost per team per year		$373.76

OTHER FARM EXPENSES

Gas and Oil	
One tractor in use 60 days at $3.83 per day (Dept. Agric. Publication No. 750)	$229.80
Seed	
Grass and legume	70.00
Corn, hybrid	12.00
Grain, 42 acres at 2 bus.—84 bus. at .80c	67.00
Threshing	
Combine—no charge	
Ensiling	
Equipment only with operator	50.00
Fences, Bridges, Drains, etc.	52.40
Automobile (farm business only) 1500 miles at 6c	90.00
Miscellaneous and General	50.00
Taxes (land only)	90.00
Interest	
Land $50.00 per acre—$6800. at 4%	272.00
Implement shed and shop—$800. at 4%	32.00
Insurance	
Implement shed (replacement value $2000) (at 50c per $100)	10.00

SUMMARY OF FARM EXPENSE

Labour	$1,285.50
Fertilizer and Manure	587.40
Implements and Machinery	900.00
Gas and Oil (tractor)	229.80
Seed	149.00
Ensiling	50.00
Fences, etc	52.40
Automobile use	90.00
Miscellaneous and General	50.00
Taxes	90.00
Interest	304.00
Implement Shed Insurance	10.00
Total Farm Expense	$3,798.10

ALLOCATION OF TOTAL FARM EXPENSE TO FARM PRODUCT

Having arrived at the above total farm expense in respect of 136 acres, it will be of interest to determine a proper allocation of this expense to the previously indicated farm production.

Some of the items of farm production are generally marketable and consequently have established market values or alternatively have accepted conventional values which may reasonably be used. Other farm products, not being generally marketable and hence having no established market price are usually, for milk cost analysis purposes, included at "farm prices". Just how these "farm prices" for products without established commercial value are arrived at has never been clear to me. I can see no other way of arriving at the real costs of these products than by treating them as residual to the known or conventionally accepted costs or values of the other products. In other words, the total farm expense being known and a proportion of the expense being allocated to certain products on the basis of their commercial or accepted values, the remainder of the expense *must necessarily* be attributed to the remaining products if it is to be comprised in ultimate milk costs or recovered in eventual milk receipts.

Thus, segregating the actual or conventionally marketable products of our farm yield we may justifiably assign to them due proportions of total farm expense as follows:

	Qty.	Value	Total	
Oats	26 tons	$38.00	$988.00	(L.C.L. Oct. 15th, 1946)
Straw	42 tons	6.00	252.00	(Conventional)
Pasture	39 acres	10.00	390.00	(Conventional)
			$1,630.00	
Residual farm expense	($3798—$1630)		$2,168.00	

This residual farm expense can only be attributed to the remaining farm product, namely silage and hay. A commonly accepted ratio of value of silage to hay is 1 to 2, or as a generalization silage is of half the value of hay. Allotting the residual farm expense of $2,168.00 to these products in this proportion we get:—

	Qty.	Farm Expense	Cost
Silage	93.3 tons	$1,044.00	$11.20 per ton
Hay	50 tons	1,125.00	22.50 per ton

These indicated costs per ton of silage and hay are far in excess of any "farm prices" used in any whole milk cost analysis of which I am aware. The highest costs previously computed for silage and hay, to my knowledge, are $4.57 and $10.22 per ton respectively as against $11.20 and $22.50 per ton in the present instance. In the Hare preliminary report on dairy farm business in Ontario 1940. the average prices charged in the Hamilton-Niagara district in determining milk production costs were, silage $4.57 per ton and hay $8.50 per ton. These prices were explained as being "at local market prices less the cost of hauling to that market" or in other words they were the prices at which silage and hay could presumably be sold at the barn. In point of fact there is no "market" for silage in the commonly accepted sense that definite commercial prices are established. Silage feeds by their bulk and nature are, for all practical purposes, non-marketable or marketable only to a negligible degree. The practical necessities of dairy farming require that silage and hay be home-grown and for this reason they must be regarded as an integral part of the dairy farm operation and not as marketable by-products. As such, they must in any analysis of milk production costs be charged with the whole actual expense incurred in delivering them to the barn for dairy use, regardless of any presumptive sales or market values.

As a further example of this, Department of Agriculture Publication No. 750, W. Kalbfleisch, 1944 in calculating horse labour costs estimates hay at $6.50 per ton, bedding at $4.00 per ton and pasture and fencing at $2.50 per acre. By comparison with these figures my "conventions" of $6.00 per ton for straw and $10.00 per acre for pasture appear inordinately high. But it must be noted that if these values are to be reduced the residual farm expense attributable to silage and hay becomes proportionately greater and the discovered cost per ton of $11.20 and $22.50 respectively for these products must be placed still higher. To reduce the stated values of straw and pasture without correspondingly increasing the costs of silage and hay would be merely to evade or ignore the real costs incurred.

This same official and comparatively recent Publication costs grain at 1c per lb. and labour at 20c per hour. Using various costs or values set forth in this brochure I have calculated that the gross value of the estimated production of the typical 136 acre farm would be $1,413.50. But it has already been demonstrated that a total expense of $3,798.10 will be incurred, under present-day conditions, in securing that production. The total farm income then, on the basis of official costs or values such as 1c per lb. for grain, $6.50 per ton for hay, $4 per ton for bedding and $2.50 per acre for pasture is little more than one-third the estimated total farm expense. Since I can find no justification for any reduction in any of the items comprising this expense, I can only conclude that the foregoing costs or values of the official Publication represent, in fact approximately one-third the real costs or values of these farm products, at least in the Hamilton-Niagara district. That they are not even approximately representative of real costs is, I believe, self-evident to any farmer who has the most rudimentary sense of his farm expense. Such wide disparities between official information and the grim realities of farm costs seem to call for explanation and certainly engender misconceptions in the minds of many farmers as well as in the comprehension of the public.

Virtually all whole milk cost studies, after failing to deduce or discover any adequate net return or "living" for the average dairy farmer, inevitably reach the conclusion that he can and does continue to exist only by "taking it out of his own hide" or by "living off his depreciation and interest". Undoubtedly this conclusion is right. The regrettable fact is that these very studies, while sincerely intended to advantage the farmer, are actually tending to perpetuate this condition. They do this in general "*by analyzing the dairy farmers circumstances in light of the prevailing rather than the required price of milk* to the consumer, and in particular by *failure to recognize and include the real costs of home-grown dairy feed at the barn.*

If milk cost analyses show, as they do, that the average dairy farmer's receipts at current milk prices do not exceed his production costs to the extent of an adequate "living" then some elements of his production cost are obviously being priced at too low levels. I submit that this is evidently the case with regard to home-grown roughages and succulent feeds.

For present purposes, the foregoing does not in any event, affect the main issue of determining final milk costs to the farmer. It does serve to point up what I believe to be a vital underlying fallacy in all milk cost studies, official or otherwise, of which I am aware. However, the total farm expense of $3,798.10 having been demonstrably incurred for feed, bedding and pasture it must necessarily be carried forward in whole to Dairy Account, regardless of its allocation to farm product.

Balance of Farm Product and Farm Stock

Before proceeding to an analysis of dairy costs it would be appropriate to conclude the farm analysis with a determination of the balance of the overall operation, that is, to ensure that the farm plan and product previously indicated provide an adequate but not excessive source of supply for the dairy operation.

To determine the total of home-grown feed available for the dairy herd:

	Total Tons	Horses Tons	Bull Tons	Available Tons for Herd
Oats	26	2	1.5	22.5 (add 10% oil cake) 24.7
Silage	93.3			93.3
Hay	50	3	2	45

On the basis of various authorities and experience I believe the following to be a reasonable statement of feed consumption per animal:—

Cows	Assume milk production 7600 lbs. per annum 4% b.f.	
	Housed 7 months or 210 days Hay—12½ lbs. per day—210 + 30 summer feed	3,000 lbs.
	Silage—30 lbs. per day 210 + 30 summer feed	7,200 lbs.
	Concentrate—at 4 lbs. milk to 1 lb. concentrate	2,000 lbs.
Heifers	Over one year. Barn feed 7 months.	
	Hay—10 lbs. per day 210 days	2,100 lbs.
	Silage—15 lbs. per day 210 days	3,150 lbs.
	Concentrate—3 lbs. per day 210 days	630 lbs.
Heifer Calves 6—12 months.		
	Hay—3 lbs. per day 240 days	720 lbs.
	Concentrate	500 lbs

Assuming for the moment a reasonably differentiated herd (the bull being already provided for) of:—

Cows	20
Heifers (12–30 months)	12
Calves (6–12 months)	4
Calves (1–6 months)	4

then on the basis of the previous estimate of consumption per animal the total feed requirements will be:—

Animals	No.	Lbs. Hay Each	Tons Hay	Lbs. Silage Each	Tons Silage	Lbs. Ration Each	Tons Ration
Cows	20	3,000	30	7,200	72	2,000	20
Heifers	12	2,100	12.6	3,150	18.9	630	3.7
Calves	8	720	3			500	2
		Hay	45.6	Silage	90.9	Ration	25.7

Balancing these feed requirements for the above herd against the previously determined available feed we get:—

	Available	Required	Residue
Hay	45 tons	45.6 tons	— .6 tons
Silage	93.3 tons	90.9 tons	2.4 tons
Concentrate	24.7 tons	25.7 tons	—1 tons

It is thus evident that, within very narrow margins of tolerance, the farm plan and product indicated and the aforesaid dairy herd constitute a properly balanced and practical dairy farm operation.

THE DAIRY

It has been established that the typical dairy farm of 136 acres will support a herd of:—

Cows	20
Heifers (12 to 30 months)	12
Calves (6 to 12 months)	4
Calves (1 to 6 months)	4

Value of Herd

For the purpose of certain subsequent determinations it is necessary to arrive at a proper valuation of the above herd. This is a further respect (the real cost of growing dairy animals through various stages to milking age) in which I believe most farmers and many authorities rely heavily upon inspired or instinctive guesses. In the present instance, therefore, I have evaluated the typical herd "from the ground up" in the following way:—

(*Basis*)—Cost to raise dairy heifer to milking age, av. 2 years, 6 months. Assume calf to be born in May, calving in November.

Period 1—12 months	
Calf value	$5.00
Milk 300 lbs. at $4.91	14.73
Calf startena	17.60
Hay, 240 days at 3 lbs—720 lbs. at $22.50	8.10
Ration 500 lbs. at $40 per ton	10.00
	$55.43
Labour, 2 M.W.U's.—20 hrs. at 63c	12.60
Bedding 2 lbs. per day 365 days at $6 Ton	2.20
Housing	2.00
Miscellaneous	3.00
Cost to 12 months	$74.23
Period 12—30 months	
Pasture yearling, 5 mos. at $2	10.00
Winter 210 days—	
Hay 2100 lbs. at $22.50	23.60
Silage 3150 lbs. at $11.25	17.45
Ration 630 lbs. at $40.00	12.60
Pasture 2 yr. old 5 mos. at $2	10.00
Ration 300 lbs. at $40.00	6.00
	$79.65
Labour 3 M.W.U's. for 1½ yrs. at 63c	18.90
Housing	2.00
Miscellaneous	5.00
Bedding, 240 days at 8 lbs.—1920 lbs. at $6	5.75
Cost 12 to 30 months	$111.30
Cost 1—12 months	$74.23
Cost 12—30 months	111.30
Cost to raise to average milking age	$185.53

(*Summary*) *8 calves in Herd (1 to 12 months)*	
Base Price of calf $5.	
Cost to raise to 12 months ($74.24—$5.00) $69.08.	
Average (6 month) value $\frac{\$69.08 + \$5.}{2} = \$39.54 \times 8$	$316.32
12 Heifers in Herd (12 to 30 months)	
Base cost of heifer at 12 months, $74.23	
Cost to raise 12—30 months 111.30	
Average (21 month) value	
$\frac{\$111.30 + \$74.23}{2} = \$219.88 \times 12$	$1,538.56
20 Cows in Herd	
Average cost to raise = $185.53 x 20	3,710.60
	$5,569.16
Bull	200.00
Herd Value	$5,769.16

Depletion of Herd

Since milk production and receipts must be constantly maintained if the business is to continue and our analysis to be valid, the first costs to be considered in the dairy operation are those incurred in offsetting natural depletion. This, in effect, is a question of the disposition of the young stock.

In agricultural circles there is a wide acceptance of 5 years as the average productive life of a dairy cow. However, Bulletin 341 of the U.S. Department of Agriculture finds that this average life ranges from 3.6 to 4.5 years in widely separated areas of the Eastern and Middle Western States. Furthermore, recent average annual milk production for more than 22 million cows in the United States was no more than 4,510 lbs. This is far short of the average of 7,600 lbs. of 4% milk presumed for the purposes of this analysis. The additional production can be secured only by stringent herd culling and high feeding. Excessive feeding notoriously accelerates herd mortality. Both these factors then operate to reduce the average productive life in a dairy herd. I am confident that the 3 year estimate of some authorities as the average productive life in a herd bred, culled and fed for high production is closer to the mark and I am very certain that my own record over a fifteen year period is still less favourable. When we consider the cumulative possibilities of herd depletion arising from Bang's storms, mastitis and non-breeding I believe and my own experience more than confirms that an estimate of 4 years maximum average productive life is entirely warranted and conservative.

It follows from this that our herd of 20 cows will be naturally depleted by 5 animals during a year of operation. Disposal of these to butcher or bone-yard at an average of $80 each will be later credited against dairy expense.

The disposition of young stock is complicated, in theory as in practice, by the necessities of maintaining milk quotas. However, if we assume for simplicity that the 8 calves of the herd are retained until grown, a further 3 animals are available for disposal. These also will be later credited against dairy expense at $200 each.

An estimated natural increment of 12 calves available for sale at $5 each will also be later credited to the dairy operation.

Having thus provided for herd maintenance with due credits accruing to dairy account it remains to provide for the costs of bought feeds before proceeding to consider other dairy costs.

Concentrate—2 tons, oil cake	$100.00
Calf feed—Startena, 8 calves, $17.60	140.80
Bought feeds expense (dairy account)	$240.80

Labour Expense

According to Cornell University Bulletin No. 539 total manpower requirements for 136 acres supporting 20 cows, 12 heifers and 8 calves will be:—

	M.W.U's. per Head	Total
20 cows, majority purebred	20	400 M.W.U's.
20 heifers and calves	2	40 M.W.U's.
Dairy		440 M.W.U's.
Farm		195 M.W.U's.
Total		635 M.W.U's.
That is—		
2 men at		317.5 M.W.U's. each.
or 2.5 men at		250 M.W.U's. each.

In practical terms this indicates that 3 men will be required in the 6 summer months and 2 men in the other six months. Eliminating for present purposes the labour contribution of the owner, the total hired labour requirement is 1.5 men averaged over the year. Of this labour .8 man per annum has been found necessary for farm operations, leaving .7 man per annum as the hired labour requirement for dairy operation.

Hired labour expense to dairy account may therefore be expressed as:—

.7 man x 250 M.W.U's. x 10 hrs. x 63c per hour	$1,102.50
Workmen's Compensation	23.00
Total hired labour expense (dairy account)	$1,125.50

Buildings and Equipment

It is believed that the following represent very conservative estimates of dairy farm building and equipment values as a basis for calculation of interest and depreciation. No costs in respect of a farm house are included and building values are taken at depreciated levels representing a mere fraction of their current replacement values:—

Barn, Calf Barn, Silo	$5,000.00		
Interest ($5,000 at 4%)		$200.00	
Depreciation ($5,000 at 3%)		150.00	
Insurance (on 90% of estimated replacement value of $12,000)		54.00	
Taxes		60.00	
Maintenance		100.00	$564.00
Well pump and water system	$350.00		
Refrig. unit with tank	300.00		
Milking units and piping	500.00		
Grain roller and motor	150.00		
Cooler and circulating pump	110.00		
Litter carrier and tracks	100.00		
Feed truck	60.00		
	1,570.00		
Interest (half value at 4%)		$31.40	
Depreciation ($1,570 at 10%)		157.00	
Insurance		7.50	
Maintenance		80.00	$276.00
Veterinary Service and Medicine			$100.00
Automobile (3,000 miles at 6c)			$180.00
Miscellaneous			
Telephone (dairy use)		$20.00	
Power and light		96.00	
Disinfectant, spray, etc.		30.00	
Stable phos. (2 tons)		60.00	
Registrations, transfers, R.O.P. costs		60.00	$266.00
Interest and Insurance on Herd			
Value of Herd	$5,764.00		
Interest at 4%			$230.00
Insurance (at 50c per $100)			$28.80

RECAPITULATION OF TOTAL FARM AND DAIRY EXPENSE

	Farm		Dairy		Total
Labour (Hired)	$1,285.50		$1,125.50		$2,411.00
Fertilizer and manure	587.40				587.40
Implements and machinery	900.00		276.00		1,176.00
Gas and oil	229.80				229.80
Seed	149.00				149.00
Ensiling	50.00				50.00
Fences, bridges, drains, etc.	52.40				52.40
Automobile use	90.00		180.00		270.00
Miscellaneous	50.00		266.00		316.00
Taxes	90.00		60.00		150.00
Feed (bought)			240.80		240.80
Barns			564.00		564.00
Vet. and medicine			100.00		100.00
Interest at 4%	304.00	(farm)	230.00	(herd)	534.00
Insurance	10.00	(imp. shed)	28.80	(herd)	38.80
Total Farm Expense	$3,798.10		$3,071.10		$6,869.20

Credits:

5 cows at $80	$400.00	
3 animals at $200	600.00	
12 calves at $5	60.00	
Manure	400.20	
730 qts. milk at 7c (owner)	50.40	$1,510.60
Total farm and dairy expense		$5,358.60

MILK PRODUCTION

20 cows—average 7600 lbs.		152,000 lbs.
Deduct for farm use:—		
Calves (8 x 300 lbs.)	2,400 lbs.	
Owner and help (4 qts. x 365 days)	3,650 lbs.	6,050 lbs.
Net saleable milk production		145,950 lbs.

MILK COST

Milk Production	Total Expense
1,460 cwt.	$5,358.60
Net cost per cwt.	$3.67
Haulage	.25
	$3.92

It will be recalled that in arriving at the total dairy farm expense nothing has been included as return for the labour of the owner, who has been estimated as contributing a full year's work. Similarly, nothing has been provided for his housing or managerial effort. His only return from milk at $3.92 per cwt. is two quarts of milk per day.

If we assume, for lack of any other criterion and because it represents a very conservative not to say grudging premise, that he is entitled to the same return for his labour as his hired help we may then state the resulting cost of his saleable milk production as:

Milk Production		Total Expense
1,460 cwt. Farm and dairy expense		$5,358.60
Owner's labour (250 M.W.U's. at 63c)		1,574.40
		$6,933.00
Cost per cwt.	$4.75	
Haulage	.25	
	$5.00	

As a check on the general accuracy of this finding we may apply the widely accepted Misner formula for determination of cost of 100 lbs. of milk. using the labour rate and home grown feed costs previously established:—

Hamilton-Niagara Milk Cost
Formula of Professor E. G. Misner

30 lbs. of dairy feed and concentrate at $2.15 per cwt	65
100 lbs. of silage at $11.20 per ton	.56
60 lbs. of hay at $22.50 per ton	.67
Total feed cost	$1.88
3 hours of labour at 63c per hour	1.89
Total feed and labour cost	$3.77
Cost per cwt. at farm, including interest and depreciation $\left(\frac{3.77 \times 100}{80}\right)$	4.71
Haulage	25
Actual cost production and delivery	$4.96

This close coincidence of results, obtained in one case by application of an accepted general formula and in the present case by a detailed analysis "from the ground up", constitutes strong support of the validity of the analysis. In particular it supports the determinations of 63c per hour for labour and $22.50 and $11.20 per ton respectively for home-grown hay and silage, these being the factors which, in this or any farm analysis, are most open to variable estimation.

It must be noted that the discovered cost of $5.00 per cwt. for milk in the Hamilton-Niagara district still does not make any allowance for the owner's management effort. It provides him and his family only with a living on the level of wellbeing of his own hired help or of the lowest paid category of industrial workers. Not to pursue the matter further, the evidence of this analysis is, that to the extent that the Hamilton-Niagara district dairy farmer receives less than $5.00 per cwt. for whole milk he is living at a relatively sub-standard level of existence or alternatively he is living off his temporarily "escapable" costs such as interest, depreciation, maintenance, etc., or in other words, off the depletion of his physical and capital resources.

Anyone familiar with farm life throughout Ontario knows that this is no mere theoretical deduction but an evident matter of fact. Soil erosion and depletion, neglected pastures, dilapidated buildings, inferior living conditions and many other evidences of insufficient capital recovery and reinstatement, to say nothing of deserted farms, are the rule rather than the exception.

This is a condition which, in the nature of things, can not continue indefinitely. Some readjustment or reaction is inevitable. Already there are signs of this in the fact that many larger scale dairy farmers, more immediately alive to unfavourable cost though not necessarily having a detailed knowledge of their nature, are "getting out of the business" in whole or part. I sincerely regret to say that I am to be numbered among these.

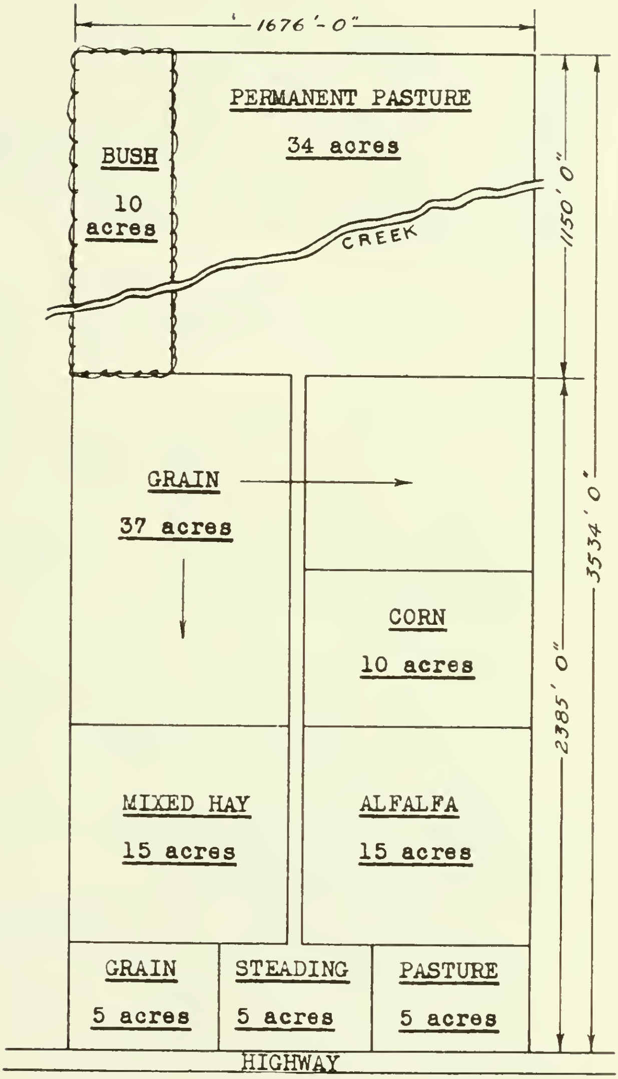
It might be contended that the elimination of the larger more specialized dairy farmer is a desirable readjustment in the present circumstances, permitting an easement of the price situation by a reduction of supply and by a reliance upon "low-pay", "no-profit" sources of production. As I have said before I believe this to be a policy of despair, which can only result in the segregation of the dairy farm community as a low-standard, underprivileged and depressed economic group. I believe that any consideration of whole milk costs or prices based on such a conception is, in effect, discriminating against the farmer by setting up unique and unprecedented standards of economic judgment for his case and will, furthermore, constitute a positive disservice not only to the farmer but to the country at large.

CONCLUSION

I am fully alive to the fact that some of the data set forth here may be open to other estimation in detail, but I do not know of any respect in which they can be so substantially modified as to materially impair the conclusion reached. In this connection it should be pointed out that no consideration has been given to the matter of maintaining milk quotas, a factor variable in accordance with prevailing individual circumstances, or to housing of the farmer and his family or to his management effort or to the miscellaneous labour not included in the normal labour allowances. These, if given any consideration, would still further confirm the finding of this analysis that the true cost of producing 100 lbs. of whole milk in the Hamilton-Niagara district, under present conditions, is $5.00—or more.

"THE FARM"

Approx. Scale:- 1 inch = 400 ft.


1676'-0"
PERMANENT PASTURE
34 acres
BUSH
10 acres
CREEK
1150'0"
3534'0"
GRAIN
37 acres
CORN
10 acres
2385'0"
MIXED HAY
15 acres
ALFALFA
15 acres
GRAIN
5 acres
STEADING
5 acres
PASTURE
5 acres
HIGHWAY

H.R. HARE:-
Average Farm
Hamilton-Niagara District 136 acres

Assume Bush	10	acres
" Permanent Pasture	34	"
Adjusted acreage	103	"
Steading	5	"
Crop acreage	82	"

APPENDIX 28

SUGGESTIONS TOWARD ASCERTAINING PRODUCTION COSTS

It is obvious that a knowledge of production costs provides a valuable guide when prices are being negotiated or determined. One of the reasons for the relatively weak bargaining powers of the producers has been lack of accurate knowledge in respect of this. If producers are to receive satisfactory remuneration for their product, prices paid must bear some relation to costs, and the fixing of prices is obviously also very important in ensuring sufficient supplies of fluid milk. The following suggestions briefly outline methods which might be sufficient for the purposes of the Milk Control Board:

1. The first step in securing cost information should be to undertake a detailed study in which a large and representative body of producers would keep actual cost records under whatever amount of supervision might be found necessary. Such a study might well follow the general pattern laid down in connection with the Hare study of 1936-39.
2. The information secured in this study should be used to calculate a formula showing the quantitative requirements of the several cost items. This formula could then be used to calculate the costs existing at later periods.
3. In order to provide a continuous check on the accuracy of the costs resulting from use of the formula, the Board should follow up the original study with one which would become continuous but which would be based on records from a relatively small number of farms. This study would be designed to provide a running record of the changes in the kinds and amounts of the various items used in milk production. For this purpose it is felt that the records of a small group of producers would suffice to give a representative picture of the changes taking place. Revision of the formula in the light of this continuous study should provide a continuous supply of reasonably accurate cost figures, at a relatively small expenditure.
4. Where milk production is only one in a considerable list of farm enterprises and where, as a result, it is practically impossible to calculate costs of milk production with any semblance of accuracy, consideration should be given to calculating the total net farm income. In such cases net income could be substituted for costs as an index of economic well-being. This situation prevails in respect of most of the creamery patrons.
5. In making the detailed cost studies here indicated the Board make every attempt to select producer-co-operators who are already accustomed to keeping accounts and convinced of the wisdom of doing so. To the extent that such producers can be found the amount of supervision required can be reduced while the accuracy of the data secured can be increased.
6. All producers of milk should be encouraged to keep continuous records of their costs independently, to the end that more efficient production may be gradually effected.

APPENDIX 29

ROYAL COMMISSION ON MILK
INDEX TO ACCOUNTANTS' REPORT
SURVEY OF CHEESE MANUFACTURERS LOCATED IN THE PROVINCE OF ONTARIO

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The Honourable Justice Dalton Wells.
Commissioner,
Royal Commission on Milk.

Accountants' Report
Survey of Cheese Manufacturers Located in the Province of Ontario

Sir:—

In submitting this report, reference should be made to the decision of the Dominion government to terminate subsidies to the cheese industry on April 30 last and to permit an increase in price at the manufacturers' level of three cents per pound of cheddar cheese (equal to 4 cents at the consumer level), as from May 1, 1947. The announcement was made as our assignment was approaching completion.

Such measures were of much importance following several years of price control regulations and it is expected that they will have a favourable effect on the earnings of cheese manufacturers for the current year.

Assignment, approach and procedure

Assignment:

Having regard to the provisions of the Order-in-Council dated October 1, 1946, we were required to investigate and report on the operations of cheese manufacturers located in the Province of Ontario with particular reference to costs, prices, price spreads, methods of financing and methods of management.

In connection therewith it is thought that a brief reference to a few of the more important features of the industry might facilitate your conclusions.

Industry background:

The industry is actively represented by a trade organization known as The Ontario Cheese Producers' Association with a membership approaching 25,000 producers.

Since 1939 the production of cheddar cheese has increased very substantially, the peak being reached in 1942 when the output for Ontario approached 128 million pounds. In the years prior to the war, production approximated 85 million pounds per annum.

About 60 million pounds or two-thirds of the cheddar cheese produced in the Province was exported in 1946 principally to Great Britain. This represented about 60% of the total cheese exports of the Dominion.

During 1946 approximately 92 million pounds of cheese were produced in Ontario having a value in excess of 20 million dollars at the wholesale level.

Factory cheese accounted for 24% of the total whole milk production of the Province or about 15% less than fluid milk requirements, as shown hereunder.

Allocation of estimated pounds of whole milk produced in Ontario for 1946

	1946			1945
	Finished product	pounds of whole milk	% of total whole milk	% of total whole milk
Factory cheese..........	91,978,000 lbs.	1,030,153,600	23.62	26.94
Creamery butter.........	68,785,800 lbs.	1,610,275,600	36.92	38.47
Fluid milk..............	467,736,000 qts.	1,206,758,900	27.67	23.09
Fluid cream.............	13,519,000 qts.	148,709,000	3.41	2.89
Condensed whole milk..	14,765,700 lbs.	33,665,800	.77	.77
Evaporated milk.......	98,063,700 lbs.	215,740,100	4.95	4.83
Powdered whole milk....	14,535,200 lbs.	116,281,600	2.66	2.41
Totals..........		4,361,584,600	100.00	100.00

Of the 600 cheese factories located in the Province only about 30 are operated independently of the cheese milk producers to the extent that they actually buy the cheese milk, process it, and dispose of the finished product entirely as they see fit. The remaining 570 factories are operated on a cooperative basis and may be divided into two classes, viz., those owned by cheesemakers who contract with the cheese milk producers to process on a fee basis, and those which are owned by the cheese milk producers themselves who share in the excess of revenues over expenditures, on a pro rata basis, at the close of each season.

The industry is of a seasonal nature, most cheese factories concentrating on production during the summer months when supplies of whole milk are at a peak.

Approach and procedure:

Of the 600 cheese factories located in the Province a fair representative proportion were asked to submit financial statements relating to the fiscal year next preceding October 1, 1946, also estimates of net profits for the current fiscal year, before provision for income and excess profits taxes. Those selected included the two types of cooperatives as well as independent cheese factories.

Generally speaking the standard of the financial statements was not as satisfactory as was anticipated, particularly those relating to the cooperatives, many of which merely comprised a list of expenditures in chronological order with little, if any, indication as to the nature of the expense, the payee's name and date of payment providing the only reference.

Following a review of the financial statements, a representative group was selected for the purpose of completing a form of questionnaire. Here again, however, the response was not as comprehensive as was hoped for, a number of concerns being unable to furnish certain of the data even though consideration had been given to the ability to complete in making our selection, as well as other factors.

As with other sections of the milk industry, code numbers were employed throughout the survey to ensure privacy and facilitate handling. A considerable amount of correspondence and personal consultation was involved in obtaining a sufficiently satisfactory coverage for the purposes of this report.

Overall operating results for the fiscal year next preceding October 1, 1946

Ontario cheese sales for the twelve month period totalled 116,093,000 pounds comprised as follows:

	Quantity	Value	Cents per pound
Cheddar	115,201,000	$24,960,000	21.67
Other	736,000	199,000	27.04
Farm made	156,000	33,000	21.15
	116,093,000	$25,192,000	21.70

It will be noted that cheddar cheese sales represent more than 99% of total.

The values and unit prices shown are at the wholesale level as reported by the Dominion Bureau of Statistics. The average price received by the cheese manufacturers during the year, combining all grades, was 20 cents per pound F.O.B. factory shipping point, the difference between it and the wholesale price of 21.70 cents representing freight, storage, commission and other handling charges.

Operating results — cooperatives owned independently of cheese milk producers:

The fees, salaries, or other charges for services made by the independent cooperative factories for the conversion of cheese milk into cheddar cheese, during the year under review, ranged from 2 cents per pound of finished product to almost 3 cents per pound. In addition to this the processors, in some cases, participated in the revenues from whey, butter, and cream sales, depending, of course, on the terms agreed upon with the local cheese milk producers.

This revenue, combined with the Dominion and Provincial subsidies, appears to have been sufficient in most instances to cover all processing costs including cheesemakers' salary and bonus, operating supplies and expenses, including depreciation, and still leave a reasonable surplus to compensate the factory owner for his supervisory services and provide some return on the capital invested in the factory building and equipment.

There were, of course, a number of instances where expenditures exceeded revenues, but in most cases this was attributable to some special repair or replacement cost for which no past provision had apparently been made.

In considering the amount of the excess of revenues over expenditures of the independent cooperative factories, allowance should be made for the seasonal nature of the operations, as the production of cheese is largely concentrated in the summer months when whole milk production is at its peak.

Operating Results—Cooperative Factories Owned by Cheese Milk Producers

With this type of non profit operation a secretary, and in some cases an auditor, appointed by the shareholders (or cheese milk producers) is charged with the responsibility of maintaining the books of account and presenting a statement to the shareholders at the close of the season.

While the financial statements of these cooperative plants were generally more detailed than those of the independent cooperative factories, there still exists considerable room for improvement. With some exceptions the statements merely comprised particulars of cash receipts, including subsidies, and a chronological listing of disbursements showing the name of the payee, followed by the amount of monies distributed amongst the shareholders as dividends, such odd sum as might remain being carried over to the next season.

The processing costs of this type of operation bore reasonably close comparison with the charge of from 2 cents to 3 cents per pound of finished product made by the independent cooperative factories operating on a fee basis, although it was noted that there were fairly wide fluctuations as to costs between different factories as well as from year to year amongst the smaller plants particularly, due in some instances to lack of provision for replacement of the more costly pieces of equipment in prior years.

Operating results—entire cheese manufacturing industry:

From the financial statements, questionnaires and other information submitted to us, we have developed certain data indicating on an overall basis the costs and profit margins of the 600 cheese factories located in the Province including the independent manufacturers and both types of cooperatives.

The quantity and cost of cheese produced by the 30 independents as distinct from the 570 cooperatives is not presently available to us, neither are the costs by type of cheese. The table which follows is therefore based on cheddar cheese which accounts for 99% of total production, the figures being submitted for the purpose of providing a general indication on a Province wide basis of the operating results of cheese manufacturers.

TABLE 1

Condensed operating results of cheese manufacturers located in the Province of Ontario for the fiscal year next preceding October 1, 1946. (Based on production of 115,201,000 pounds)

	Amount	Cents per pound	% of Sales
Sales (excluding subsidies)	$23,040,200	20.00	100.00
Material cost (including haulage)	$20,086,446	17.44	87.18
Processing, administrative and distributing cost	2,608,151	2.26	11.32
Total cost	$22,694,597	19.70	98.50
Net profit (before taxes)	$ 345,603	.30	1.50

Operating results of individual independent concerns varied considerably, some showing much wider profit margins than others. The fees and processing costs of the cooperative establishments varied by 20% and more in some instances.

The amount of capital employed for the industry as a whole could not be determined, as many factories do not prepare annual balance sheets on a cost basis. It is estimated, however, that the amount might approximate $4,500,000 which would indicate an earnings return of 8% before provision for income and excess profits taxes.

As we have mentioned, the termination of subsidies by the Dominion government and the price increase authorized in May last have no doubt created some important changes within the industry so that figures relating to the years during which price control and subsidies were in effect afford little indication regarding current operations.

Financial Position

Having regard to the fact that the majority of cheese plants are privately owned by cheesemakers, or owned through shareholdings of cheese milk producers, the amount of capital employed has little direct relationship to sales volume or profits derived from the manufacture of factory cheese. This perhaps explains in part why only a limited number of cheese plants have properly prepared balance sheets setting forth the assets and liabilities of the business in the customary manner.

Selling prices of factory cheese

In the early part of 1941 the average price, combining all grades, was 15c per pound, but this advanced until a peak of 26.3 cents per pound was reached in March, 1942.

Following the introduction of subsidies at the close of that year, the wholesale price f.o.b. factory was reduced to 20c until the close of 1945 when the price rose 2 cents to 22 cents per pound. The summer months of 1946 saw a reversion to the 20 cent price, with an increase of 2 cents per pound again in the winter months of 1946 and 1947. This price prevailed until April 30, 1947, when a price increase of 3 cents per pound of cheddar cheese was authorized at the manufacturers level (equivalent to about 4 cents to the consumer). Thus, from 1939 up to the time of this report, the average selling price of the manufacturers of cheddar cheese has advanced from 15 cents to 25 cents per pound or 66%.

Cheese is by far the most important milk product exported by the Dominion from the point of volume as well as dollar value. In 1946 over 106 million pounds was exported at an average price of 20.61 cents per pound for a value of $21,947,738.

The contribution by the Province of Ontario to this total is not recorded by the Dominion Bureau of Statistics or the Provincial authorities concerned, but we understand through the trade, that approximately two thirds of the cheddar cheese production of Ontario is shipped abroad, so that export prices and volume are normally potent factors in the determination of domestic prices. Sales of processed and other cheeses which are produced in volume by the independent cheese manufacturers as well as the larger fluid milk distributors also have some bearing on cheddar cheese prices within the Province of Ontario.

Marketing methods

The cheese manufacturers have their own marketing agency known as the "Ontario Cheese Producers' Association Limited." The constitution, objects, and certain of the by-laws together with an outline of the procedures followed are clearly set forth in the brief submitted by them.

Export sales are handled through the medium of Montreal brokers, prices and terms being largely governed by trade agreements executed by the Dominion government and that of Great Britain or other importing country.

Domestic sales of cheddar cheese representing about 33% of total production are handled by brokers and wholesalers but the proportions sold through each channel are not available. The brokerage rate is ⅛ of one cent per pound plus storage and other charges.

With the lifting of price controls the Ontario Cheese Producers' Association Limited will resume its functions as in normal times.

Earnings of cheese factories 1946

The estimates received combined with financial statements relating to the 1946 operations indicate that the earnings of the cheese manufacturing industry for 1946 may be less than those of the fiscal year next preceding October 1, 1946, due to a 19% reduction in output.

Outlook for 1947

A serious contraction in exports of cheddar cheese occurred during the first quarter of 1947, shipments from Canada totalling only 2,845,200 pounds against 15,132,100 pounds for the corresponding period in 1946. This might mean a substantial loss in revenues to Ontario cheese manufacturers and producers.

Related figures for the second quarter of the current year are not yet available but it is thought that the reduction from 1946 might not be as marked as in the first quarter.

Countering the foregoing are the price adjustments to producers and manufacturers of May, 1947. Although the producers received the greater portion of such price increase, it is considered that the profits of the manufacturers should at least equal those of 1946, provided satisfactory markets are found to absorb sufficient cheddar cheese to compensate for the reduced exports to the United Kingdom indicated in the first quarter of the current year.

With ceiling prices removed manufacturers are at liberty to take any steps which may be deemed necessary to ensure satisfactory profit margins, so that should the present price structure fail to achieve the desired results corrective measures can be taken through negotiation.

Observations and conclusions

The factory cheese industry of Ontario requires about 86% of the quantity of whole milk used in the fluid milk industry, yet the producer price is substantially less. Its influence on the overall position of the fluid milk and milk products industry is therefore very considerable.

It is apparent that reasonable profit margins for the cheese factory operators and the cheese milk producers must be assured if they are to maintain volume production and thereby play their full part in the overall progress of the industry.

Our survey of the manufacturing and producer phases of the industry provides no indication that the profit margins up to the close of 1946 were more than reasonable having regard to the seasonal nature of their operations and the importance of their contribution to the overall position of the industry.

Possible increase in sales revenue:

Domestic prices of cheddar cheese are influenced by the export prices also the selling prices of processed cheese. A selling price increase, largely to replace Dominion subsidies which were terminated, was authorized in May last and it would seem premature to consider any further upward adjustment in selling prices until sufficient time has elapsed to permit a reasonably accurate assessment of its effect on earnings.

There has been a serious contraction in export sales of cheddar cheese in the first three months of 1947 as compared with the corresponding months in 1946. Production has also declined by 4.3% up to March 31st, 1947, as compared with the first three months of 1946, and these factors are bound to have an effect on revenues and profits. They may in fact offset the benefits which may be expected from the domestic price increase of 1947.

At the time of writing this report, therefore, we see little prospect of any substantial increase in revenues unless production of butter and other products of cheese manufacturers are developed on an appreciable scale.

Possible savings and economies:

As about 87% of the total sales revenue is accounted for in the material cost of cheese, the margin on which economies might be applied is limited, especially when fixed charges such as business and property taxes and depreciation are eliminated. However, on account of the large volume, the smallest saving in the unit cost of any product reaches considerable significance in the overall earnings.

The processing and labour costs are the two most important factors in the overall cost apart from raw materials and to properly explore the possibilities of any savings under these two headings would require the assembly of much more data than is presently available. If a determined effort is to be made to hold processors' costs within certain limits the assembly of sufficient detailed statistical data is a pre-requisite.

Statistical data:

It is suggested that those authorities responsible for the safeguarding of the public interest and the advancement of the factory cheese industry in conjunction with the overall progress of the entire milk industry, should immediately formulate plans which will ensure all concerned being fully informed on the developments and trends which are bound to reveal themselves now that the industry is in the transitional stage from emergency controls to free enterprise and perhaps more keen competition in both the home and foreign markets.

To achieve this, it is important that more detailed information be obtained concerning the operations of the two types of cooperative factories referred to as distinct from the independent factories, than has been possible for us to procure in the time at our disposal.

We also consider that the statistical data presently available to the Provincial authorities, in respect of both export and domestic sales, should be enlarged upon particularly as regards type of outlet and related prices and quantities.

Due to the other divisions of the milk industry producing cheese as well as other products, it is important that there exist the utmost co-ordination between them, and to permit of this, adequate information should be readily available on each product and classification of business.

Accounting records:

As regards both the independent operators of cheese factories and the cooperative plants the standard of accounting, with a few exceptions, leaves much to be desired.

In both types of operation the only particulars of revenue and expenses available in many instances, consisted of a statement of cash receipts and disbursements, or receipts and expenditures, with the items listed chronologically and little, if any, description as to the nature of the expense.

No systematic provisions to meet emergency replacements of equipment are made as a general rule, so that the costs of conversion or processing sometimes vary considerably from year to year especially amongst the smaller factories where the volume is not sufficiently large to permit the absorption of any extraneous expense or special repair or replacement cost without seriously affecting the profit position.

As with other sections of the milk industry, we would recommend the introduction of a standard accounting system of a simplified nature which would ensure the satisfactory and prompt completion of informative returns of an administrative or statistical character and at the same time serve to improve the standard of managerial and accounting control in an industry which is of vital concern to milk producers and the consuming public.

Finally we would direct your attention to possible economies in the manufacturing phase which might be disclosed by careful study of a selected representative group of operators, both cooperative and independent.

Productive capacity:

From our review of the questionnaires we formed the impression that the productive capacity of cheese factories is appreciably in excess of actual requirements even allowing for the seasonal nature of the industry, the peak periods and the usual surplus margins to meet emergency conditions. The output in 1946 represented but 75% of 1942 production so that further contraction might cause hardship amongst factory owners. The desirability of having statistical data on productive capacities by areas might therefore be considered.

Changes in ownership:

It would appear that cheese factories have not changed hands with the same frequency as fluid milk distributive businesses. On enquiring into one of the more recent important transactions it was found that the factory had been acquired by a condensary at a consideration which seemed attractive to both buyer and seller. It has since been converted into a receiving station.

As with other divisions of the milk industry we incline to the view that such transactions should be brought to the notice of some designated Provincial authority and approval in every particular obtained before the deal is consummated.

Marketing methods:

With the resumption of normal trading the greatest responsibilities rest with the marketing agency, the brokers and wholesalers. The profit margins of the manufacturers and the cheese milk producers largely depend on the efficiency and merchandizing ability of the distributive bodies.

Respectfully submitted,

Accountant, Royal Commission on Milk,

JOHN S. ENTWISTLE,

Province of Ontario.

July 26th, 1947.

ONTARIO

SECOND
ANNUAL REPORT

THE
LIQUOR AUTHORITY CONTROL BOARD OF ONTARIO

From April 1st, 1945
To March 31st, 1946

Sessional No. 52, 1947

Printed and Published by Baptist Johnston
Printer to the King's Most Excellent Majesty

THE LIQUOR AUTHORITY CONTROL BOARD OF ONTARIO

454 University Avenue,
Toronto 2, Ontario,
October 29, 1947

To THE HONOURABLE LESLIE E. BLACKWELL, K.C.,
Attorney-General of Ontario,
Parliament Buildings, Toronto 5, Ontario.

SIR,—

Herewith I submit the Second Report of the Liquor Authority Control Board of Ontario for the twelve months' fiscal period, which ended the 31st of March, 1946.

The Members of the Board were: Judge W. T. Robb, Chairman; William T. Nugent, Vice-Chairman; and J. Frederick Reid. On August 1, 1945, J. Frederick Reid tendered his resignation and he was succeeded by John Franklin White.

The Authority Districts throughout the Province numbered fourteen made up as follows:

DISTRICT NUMBER	COMPRISING	DISTRICT CENTRE
1	Counties of Elgin (except Vienna), Essex, Kent and Lambton	WINDSOR
2	Counties of Bruce, Grey, Huron, Perth, Waterloo and Wellington	KITCHENER
3	Counties of Middlesex and Oxford	LONDON
4	Counties of Brant, Haldimand, Lincoln, Norfolk and Welland (and Vienna only in Elgin)	ST. CATHARINES
5	Counties of Wentworth and Halton	HAMILTON
6	County of York	TORONTO
7	Counties of Durham, Ontario, Peterborough, Victoria and District of Haliburton	PETERBOROUGH
8	Counties of Dufferin, Peel, Simcoe and Districts of Muskoka and Parry Sound	BARRIE
9	Counties of Hastings, Lennox, Northumberland and Prince Edward	BELLEVILLE

10	Counties of Addington, Dundas, Frontenac, Glengarry, Grenville, Leeds and Stormont	BROCKVILLE
11	Counties of Carleton, Lanark, Prescott, Renfrew and Russell	OTTAWA
12	Districts of Kenora, Rainy River and Thunder Bay	FORT WILLIAM
13	Districts of Algoma, Manitoulin and Sudbury	SAULT STE. MARIE
14	Districts of Cochrane, Nipissing and Temiskaming	KIRKLAND LAKE

The Board held the following meetings:

Annual Meetings — one in each of the 14 Districts	14
Special Meetings — at District Centres	19
Special Meetings — at Head Office, Toronto	50

The Board had twenty-four (24) inspectors in the various fourteen districts whose duties were to make periodic, as well as non-scheduled, inspections of all premises throughout the Province. Monthly reports were supplied in respect of each authority as well as a detailed annual report. The inspectors also submitted special reports when they deemed the same necessary or advisable. The many and varying duties of the inspectors include the observation of the operation of the premises to see that the same are conducted according to the law, the cleanliness of the licensed premises, the types and quality of service provided in hotels, attention to sterilization of glasses used in the consumption of beverages, the cleanliness of kitchens and equipment therein and, also, the protection afforded against fire.

On March 31, 1946, the end of the fiscal year, there were in existence 1,239 Hotel Authorities, of which 29 were Summer Hotels operating under an Authority for six months of the year; 146 Social Club Authorities; 130 Veteran and Labour Club Authorities; 205 Military Mess Authorities; and 7 Steamship Authorities. (SCHEDULE I is a list of these Authorities).

During the twelve months previous to March 31, 1946, four Hotels, one Social Club and one Steamship were destroyed by fire, as follows:

Beaumaris Hotel	Beaumaris
Red Lake Hotel	Red Lake
Park Hotel	Stanley
Clarendon Hotel	Hastings
Kirkland Lake Golf Club	Kirkland Lake
S. S. "Hamonic"	Sarnia

and their authorities were taken out of operation.

Five Authorities were surrendered during the period, namely;

National Hotel	Field
Jerome Community Club	Jerome
George Club	Fort William
Ulster Athletic Club	Toronto
Master Chefs, Cooks and Pastry Cooks, Local No. 7	Toronto

The Authority of the Locust Lawn Tennis and Country Club, Islington, was cancelled for cause.

Authorities were issued to 14 new hotels; 6 new Social clubs; and 8 new veterans' clubs. The names of these are included in Schedule I and designated as (new).

All of the Authorities listed in Schedule I were renewed for the year 1946-47 with the exception of those set forth in SCHEDULE II.

SCHEDULE III sets forth detailed statement of Authorities transferred; and

SCHEDULE IV, a list of Authorities suspended.

SCHEDULE V gives a detailed statement of the Board's expenses as of March 31, 1946.

During the year the Board found unsatisfactory persons operating Authorities of varying kinds who have been replaced on the order of the Board.

For the fiscal year April 1, 1945, to March 31, 1946, there was collected as transfer fees the sum of $732,823.65.

The Board received the utmost co-operation from Provincial as well as Municipal police officers with only a few exceptions. The Board has a staff of efficient and loyal employees who have given splendid service—many of them spending many hours of overtime to enable prompt despatch of business of the Board.

Respectfully submitted by

W. T. ROBB,

Chairman.

SCHEDULE No. I

Authorities In Existence and the Name of the Owners Thereof As of March 31st, 1946

HOTELS

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ACTON	Dominion Hotel Main Street	Royston, Mrs. M. A.
"	Station Hotel	Lasby, S. M.
ALEXANDRIA	Alexandria Hotel	Weir, A. C.
"	Ottawa House	Rouleau, E.
ALFRED	Ontario Hotel Main Street	Lafleur, E.
"	Prescott Hotel Main Street	Houle, L.
ALGOMA MILLS	Algoma Inn	Hoeberg, Mrs. M.
ALMONTE	Almonte Hotel Bridge Street	Whitten, A. H.
ALVINSTON	Columbia Hotel River Street	Bindner, C. W.
"	Grand Central Hotel	Simpson, S. S. and Munro, J. D.
AMHERSTBURG	Amherst Hotel Richmond Street	Fleming, C. W.
"	Anderdon Hotel R.R. 3	Travica, S.
"	Lakeview Hotel	Ljiljak, J. and Ostoich, E.
"	Lucier's Hotel R. R. 1	Lucier, D.
AMULREE	Royal Hotel R. R. 1, Stratford	Pedlar, Philip S.
ANSONVILLE	Anson Hotel 65 Main Street	Lozier, P.
"	Capitol Hotel	Purificati, D.
"	Union Hotel Railway Street	Abramson, L.
ARMSTRONG	King George Hotel	Lindholm, Mrs. H. I.
ARNPRIOR	Central Hotel 69 Madawaska Street	Bedore, Mrs. C.
"	New Byrne Hotel 197 John Street	Byrne, J. R.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ARTHUR	Commercial Hotel George Street	West, W. L. and Bolen, W. R.
"	Queen's Hotel	Gaffney, F. C.
ASTORVILLE	Rochefort Hotel	Rochefort, H.
ATHERLEY	Atherley Arms Hotel	Atherley Arms Limited
"	Lakeview Hotel	Atkinson, F. M.
ATIKOKAN	Atikokan Hotel	Shelepiuk, Mrs. E.
AYLMER	Central Hotel	Brooks, C. A. and Lamb, C.
AYR	Queen's Hotel Swan Street	Targonski, Stanley
AYTON	Commercial Hotel	Doersam, Peter F.
BADEN	Baden Hotel	Stiefelmeyer, Mrs. E. D.
"	Maple Leaf Hotel	Habel, C.
BALA	New Windsor Hotel	Frew, Thos. and Mathew
"	Bala Bay Lodge	Davey, C.
BARRIE	American Hotel 74 Collier Street	Soyko, W. and Shewchuk, M.
"	Clarkson Hotel 130 Dunlop Street	White, F. and McElroy, J. E.
"	Clifton Hotel 257 Bradford Street	Kerrigan, S. C.
"	Queen's Hotel 94 Dunlop Street	Queen's Hotel (Barrie) Limited
"	Simcoe Hotel Five Points	Cohen, M. and Dollinger, Simon
"	Wellington Hotel 4 Elizabeth Street	Wellington Hotel (Barrie) Limited
BARRY'S BAY	Balmoral Hotel	Estate of J. B. Billings
BARWICK	Barwick Hotel	Strain, F. J. and Gallo, S.
BATCHEWANA BAY	Batchewana Hotel	Migneron, C. H.
BEARDMORE	Beardmore Hotel	Beardmore Hotel Company Limited
BEAUMARIS	Roseneath Manor	Boyd, I. S. and Estate of F. T. W. Ford
BEETON	Beetonia Hotel	Boake, R. H.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
BELLE RIVER	Alexander Beach Grove Hotel R. R. 1 (Maidstone Twp.)	Carriere, A.
" "	Belle River Hotel Main Street	Parent, C. J.
" "	Cooper Court Hotel	DeRush, J. E.
" "	King George Hotel Main Street	George, J.
" "	Wellington Hotel	Tomich, D.
BELLEVILLE	Belvedere Hotel 360 Front Street	Allore, Mrs. L.
"	Canadian Hotel 37 Dundas Street	Canadian Hotel (Belleville) Limited
"	City Hotel 310 Front Street	Yanover, J. N.
"	Crystal Hotel 317 Front Street	Treverton, C. B.
"	Doctor's Hotel 237 Station Street	Briens, A. J. and Mrs. Cecilia
"	New Queen's Hotel 158 Front Street	Ryan, Mrs. Z. H.
"	Quinte Hotel Bridge & Pinnacle Streets	Hotel Quinte Limited
BERWICK	Ottawa Hotel	Chales, P. H.
BIGWOOD	Commercial Hotel	Loiselle, J.
BLAIR	Nicholson Inn	Nicholson, Mrs. I. M.
BLENHEIM	Blenheim Hotel	Kent, D. E.
"	Cadillac Hotel Talbot Street	Getty, F. H. and Mrs. J.
BLEZARD VALLEY	Blezard Hotel	Dennie, Glenn J.
BLIND RIVER	Harmonic Hotel Woodward Avenue	Laforge, O.
"	Lincoln Hotel	Doyle, J. J. and Robert, J.
"	Riverside Hotel	Gauthier, A.
"	Riverview Hotel (New)	Berthelot, J. L.
BLYTH	Commercial Hotel	Clare, G. W.
BONFIELD	Ottawa Hotel	Corbeil, N.
BOTHWELL	Central Hotel 164 Main Street	Morgan, L.
BOURGET	Royal Hotel	Gagne, Rheal

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
BRADFORD	Queen's Hotel Holland Street	McEvoy, H. J. and F. M.
"	Village Inn	Culham, W. H. and Grant, C. E.
BRANTFORD	Belmont Hotel 157 Colborne Street	Bailey, H. H. and Mrs. F. M.
"	Bodega Hotel 64 Market Street	Bodega Hotel Ltd.
"	Brant Hotel 89 Dalhousie Street	Brant Apartments Ltd.
"	Kerby House 224 Colborne Street	Estate of I. W. Champion and Estate of Miss E. Zimmerman
"	New Benwell Hotel 187 Market Street	McQueen, R.
"	New Butler Hotel 20 Dalhousie Street	Casey, J.
"	Prince Edward Hotel 16 Colborne Street	Howarth, A.
"	St. Julien Hotel 239 Market Street	Wood, Miss E.
"	Strand Hotel 97 Dalhousie Street	Craise, Robert A.
BRECHIN	Victoria Hotel	Mitchell, F. J.
BRESLAU	Breslau Hotel	Brohman, C.
BRIDGEPORT	Lancaster Hotel	Querin, F.
BRIGHT	Arlington Hotel	Moss, Charles H.
BROCKVILLE	Clifton Hotel 220 King Street, West	O'Connor, Mrs. M. H.
"	Commercial Hotel 214 King Street, West	Archinal, J.
"	Garbutt's Hotel 19 King Street, East	Ashley, Mrs. Jessie
"	Grand Central Hotel 130 King Street, West	Ness, Mrs. B. M.
"	Manitonna Hotel 1 King Street, East	Brockville Hotel Company Limited
BRONTE	Pig & Whistle Inn R. R. 1	Mullaney, John and Mrs. Olive S.
BRUCE MINES	Bayview Hotel	Downey, W. J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
BRUSSELS	Queen's Hotel Turnberry Street	Kirby, Mrs. M.
BURK'S FALLS	Central Hotel	Bowie, Mrs. A. M. and Brasher, Miss B. E.
BURLINGTON	Brant Inn Water Street	Kendall, C. H. and Anderson, J. M.
"	Coronation Hotel 25 Brant Street	Kozak, M.
"	Estaminet Hotel 50 Water Street	Byrens, Mrs. E. M.
"	Sherwood Inn 35 Brant Street	Timleck, Mrs. L.
CACHE BAY	Cache Bay Hotel Railway Street	Arcand, Jos.
"	Traveller's Hotel	St. George, L.
CALEDONIA	Exchange Hotel Argyle Street	Thacker, A.
"	Union Hotel Argyle Street	O'Meara, David
CALLANDER	Callander Hotel	Stirling, Mrs. L.
"	Red Line Inn	Wookey, L.
CAPREOL	Capreol Hotel Front Street	Capreol Hotel So., Ltd.
CARDINAL	Dillon House	Dillon, W. A.
CARGILL	Village Inn	Schmidt, R. G.
CARLSBAD SPRINGS	Johnson's Hotel	Johnson, Mrs. H.
CARLSRUHE	British Hotel	Halter, C. J.
CASSELMAN	New Commercial Hotel	Giroux, P.
"	Russell Hotel Main Street	Boileau, R.
CAYUGA	Campbell House	Best, J. O.
"	Cayuga Hotel	Shippel, J. A.
CENTRAL PATRICIA	Patricia Hotel	Wilson, E. S.
CHALK RIVER	Chalk River Hotel	Dover, C. C.
CHAPUT HUGHES	Village Hotel	Dame, A.
CHATHAM	Aberdeen Hotel 1 Grand Avenue, East	Martin, Jas. C.
"	C.P.R. Hotel 9 King Street	Ange, T. L.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
CHATHAM	Chatham Hotel 49 Fifth Street	Kerr, J. B.
"	East End Hotel 119 King Street, East	Blondeel, G.
"	Merrill House 2 King Street, West	Harris, L.
"	Montreal Hotel 179 Grand Avenue, West	Campbell, M. and H. C.
"	Park View Hotel 35 William Street, North	Prince, E. A.
"	Rankin Hotel 182 King Street, West	Pleasence, J. A. and Mrs. J. J.
"	Tecumseh Hotel 342 Queen Street	Morgan, R.
"	William Pitt Hotel Sixth Street	William Pitt Hotel Limited
CHATSWORTH	Campbell House	Crawford, J. F. and Mrs. M.
CHELMSFORD	Algoma Hotel	Trottier, D. and P.
"	Welcome Hotel Front Street	Vaillancourt, E.
CHEPSTOW	King Edward Hotel	Fleming, Mrs. M.
CHESTERVILLE	Dominion Hotel	Lefebvre, A. A.
"	McCloskey House	Barker, F. W.
CHIPPAWA	Chippawa Hotel 18 Main Street	Kolaczynski, K.
"	Riverside Hotel	Sainovich, G.
CHUTE A BLONDEAU	Central Hotel	Martineau, D.
CLARENCE CREEK	Du Peuple Hotel	Potvin, E.
" "	Union Hotel	Gagnon, A.
CLIFFORD	Mansion Inn Elora Street	Kruspe, J. A.
COBALT	Fraser House 24 Prospect Avenue	Abraham, E. A. and R.
"	Miner's Home Hotel 75 Lang Street	Robitaille, J. A.
COBOCONK	Pattie House	Cheney, G. J.
COBOURG	Baltimore Hotel 174 Division Street	Mackie, J. W.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
COBOURG	British Hotel 68 King Street, West	Caughey, L. A.
"	Chateau Hotel 55 King Street, East	Rogers, Mrs. B. I.
"	Homelike Inn 205 Third Street	Kelly, G. H.
"	New Dunham Hotel 256 Division Street	Bell, F. J.
"	New Royal Hotel 73 King Street	Midgley, J. A.
COCHRANE	Albert Hotel 183 Railroad Street	Boisvert, A.
"	Anderson Hotel 179 Fourth Avenue	Thiboutot, F. X.
"	King George Hotel Fourth & Railway Sts.	Dobenko, M.
"	London Hotel Railway Street	Chamandy, Mrs. F.
"	Northland Hotel 125 Fourth Avenue	Johnson, Mrs. A.
"	Stevens House 223 Railway Street	Stevens, Mrs. Francis E.
CONESTOGO	Trail's End Hotel 5 King Street	Richter, M.
CONNAUGHT STATION	Connaught Hotel	Racicot, L.
CORNWALL	Carleton Hotel 33 First Street, East	Runions, Mrs. M. E.
"	Central Hotel 341 Pitt Street	Miller, J.
"	Cornwallis Hotel 22 Second Street, West	Cornwall Community Hotel Company Ltd.
"	Grand Hotel 440 Water Street, East	Miron, A. D.
"	King George Hotel 3 Second Street, East	Thomas and Nash Limited
"	National Hotel 830 Second Street, West	Humans, M.
"	Lloyd George Hotel 15 Pitt Street	Lloyd and George Hotel Company Limited
"	Royal Hotel 106 Montreal Road	Fred Lefebvre Company Limited

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
CORNWALL	St. Lawrence Hotel 198 Montreal Road	Mercier, A.
COURTLAND	Courtland Hotel	Vecsi, J.
COURTWRIGHT	Bedard Hotel Front Street	Bedard, Mrs. L. J.
CROWLAND	Station Hotel 619 King Street	Adamcryck, J. and Zuba A.
CRYSLER	Commercial Hotel	Brisebois, E. and Martin, D. E.
"	Russell Hotel Charles Street	Dutt, J. J.
CRYSTAL FALLS	Chebogan Hotel (New)	Fisher, Robert
CRYSTAL BEACH	Teal's Hotel	Teal, Mrs. J. B.
" "	Hebert Hotel Ridge Road	Hebert, W. O.
" "	Lincoln Hotel 5-7 Lincoln Road, East	Buck, E. A.
" "	Markcity Hotel 7 Cambridge Street, East	Berezowsky, W.
" "	Sheehan's Terrace Inn 41 Terrace Lane	Milligan, E.
" "	Martinell Hotel	O'Brien, Mrs. M. E.
" "	Ontario Hotel	Holmes, W.
" "	Park Hotel	Hitch, Mrs. E.
CURRAN	Curran Hotel	Laframboise, V.
DELHI	Delhi Inn	Wardell, H. and Caswell, H. L.
"	Stoddard Hotel King & Main Streets	Tuinyla, M.
DESBORO	Desboro Hotel	Fitzpatrick, J.
DESERONTO	Arlington Hotel Main Street	Marck, Stanley R.
DOUGLAS	Minto House	Neville, M. T.
DRESDEN	Morgan Hotel Main Street	Weese, D. J.
DRYDEN	Central Hotel 20 King Street	Kunza, A. A.
"	Dryden Hotel 74 Queen Street	Self, W. E.
DUBLIN	Huron Hotel	Mulligan, P.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
DUNDAS	Central Hotel 93 King Street	Haley, E. J.
"	Collins Hotel 33 King Street	Lowry, E. F.
"	Melbourne Hotel 89 King Street	Deratnay, G.
DUNKELD	Dunkeld Hotel R. R. 4, Walkerton	Eigenbrod, Mrs. C. P.
DUNNVILLE	New Royal Hotel Maple Street	Hensgens, J. and Mrs. M.
"	Queen's Hotel 121 Main Street	Edgar, G. R.
"	Savoy Hotel 418 Chestnut Street	McCorrie, J. P.
"	Victoria Hotel Chestnut Street	Garbutt, F.
EAGLE RIVER	Cascade Hotel	Steiner, J.
EARLTON	Cecil Hotel	Paiement, Roger
"	LaSalle Hotel	Cloutier, A.
EASTVIEW	Claude Hotel 48 Beechwood Avenue	Claude Hotel Co. Ltd.
"	Eastview Hotel 120 Montreal Road	Eastview Hotel Ltd.
EAST YORK	Wallace Hotel 302 O'Connor Drive	Wilson, G. A.
EGANVILLE	Central Hotel	Foy, F. C.
"	Eganville Hotel	Sammon, Miss Mona
ELGIN	Empire Hotel	Estate of P. J. Fahey
ELK LAKE	King Edward Hotel	Montpetit, E. and Sauve, L.
" "	Stonehouse Hotel Fourth Street	Rusich, Nick and Mrs. M.
ELMIRA	Central Hotel 32 Arthur Street	Mailloux, W. E.
"	Royal Hotel 4 Arthur Street	Harvey, G. J.
"	Steddick House 52 Arthur Street	Yanchus, Mrs. P. E.
ELMVALE	New Palace Hotel Queen Street	Smith, A.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ELMWOOD	Queen's Hotel	Sainsbury, O.
ELORA	Iroquois Hotel Metcalfe Street	Wood, J. A.
EMBRUN	Standard Hotel	Burelle, P. A.
EMO	Emo Hotel	Johnston, G. F.
ENGLEHART	Clifton Hotel	Korman, D.
"	Commercial House Fourth Avenue	Clark, J.
"	Eldon House	Morris, Jas.
ERIEAU	Lakeview Hotel	Yandrash, I. and Vucic, Vid
ERIN	Busholme Hotel	Fullerton, A. M.
ERINSVILLE	Lakeview Hotel	Wagar, W. S.
ESPANOLA	Espanola Hotel 1 Barber Street	Alexander, D.
ESSEX	Aberdeen Hotel Talbot Street	Stoots, W. F.
"	Grand Central Hotel Talbot Street	Crowley, L. L.
ETOBICOKE	The Old Mill 35 Old Mill Road	Valley Improvement Company Limited
FAIRBANK	Fairbank Hotel 2418 Dufferin Street	Crawford, S. B.
FALLS VIEW	Falls View Hotel 2434 Stanley Avenue	Podhorn, S. F.
FAVORABLE LAKE	Hill Top Lodge	Hill Top Lodge Co. Ltd.
FERRIS WEST	Algonquin Hotel	Dugas, W. W.
" "	Lakeview Inn	Leach, Mrs. M.
FIELD	Field Hotel	Sauve, Leo and Philippe
FISHERVILLE	Erie House	Bonner, W. E.
FLINTON	Stewart House Holden Street	Yanch, J. E.
FOLEYET	Commercial Hotel	Denommee, J. Robert and M.
"	Gold Belt Hotel	Mageau, F.
FORBES	Maple Leaf Hotel	Dubois, Z. and Giroux, A.
FORMOSA	Commercial Hotel	Schnurr, C.
"	Formosa Hotel	Opperman, A. M.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
FORT ERIE	Anglo-American Hotel 280 Niagara Boulevard	Neichenbauer, A., A. and C.
" "	Erie Lane Hotel 33 Princess Street	Masich, Frank J. and Nickolas E.
" "	Fort Erie Hotel 224 Garrison Road	Wetzel, P. H.
" "	G. T. R. Hotel 366 Gilmore Road	Karpiniec, J.
" "	New King Edward Hotel 271 Niagara Boulevard	Sima, Andrew, Andrew Jr. and Stanko, M.
" "	Niagara Hotel 92 Niagara Boulevard	Kee, W.
FORT ERIE NORTH	Barnea House 28 Courtwright Street	Dancy, R. P.
" " "	Merview Hotel 56 Courtwright Street	Compton, M.
" " "	Ohio Hotel 33 Niagara Boulevard	Zajac, Andrew
" " "	Royal Hotel 1 Niagara Boulevard	Uster, Mrs. Verna
FORT FRANCES	Emperor Hotel 400 Front Street	Pidlubny, G.
" "	Fort Frances Hotel 427 Mowat Street	DeCruyenaere, A. A.
" "	Monarch Hotel Front Street	Pechet, W.
" "	Prince Albert Hotel 131 Church Street	Griffiths, Mrs. Marie
" "	Rainy Lake Hotel 235 Scott Street	Gray, J. J.
" "	White Pine Inn 800 Scott Street	Crawford, A. G.
FORT WILLIAM	Adanac Hotel 227 Simpson Street	Estate of D. L. Crites
" "	Alexandra Hotel 100 Gore Street, East	Zaroski, W.
" "	Empire Hotel 140 Simpson Street	Hurtig, M. and B.
" "	Empress Hotel 105 Heron Street	Zaroski, W.
" "	Royal Edward Hotel 114 South May Street	Fort William Hotels Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
FORT WILLIAM	St. Louis Hotel 401 Victoria Avenue	Rothwell, S. E.
" "	Simpson Hotel 401 Simpson Street	Watson, R. O.
" "	Victoria Hotel Victoria Avenue & Syndicate Street	Wadson, I. I.
" "	Wayland Hotel 1019 Gore Street, West	Bernardi, B.
" "	West Hotel 126 Simpson Street	Black, A. J.
FOURNIER	Commercial Hotel Main Street	Besner, L.
FRANZ	Franz Hotel	Miller, Mrs. A. M.
GADSHILL	Exchange Hotel R. R. 1	Gerhardt, G. C.
GALT	Iroquois Hotel 129 Main Street	Iroquois Hotel Limited
"	New Albion Hotel 103 Water Street, North	Murray, A. H.
"	Overland Hotel 18 Concession Street	White, Mrs. F. E.
"	Royal Hotel 138 Main Street	S. A. Greer Interests Ltd.
GANANOQUE	International Hotel King & Main Streets	McGregor, Mrs. A. I.
"	Provincial Hotel King Street	McCarney, H. A.
"	Gananoque Inn Stone Street	Gananoque Inn Limited
GARSON	Royale Hotel (New)	Mady, Chas. A.
GEORGETOWN	Exchange Hotel	Wright, Mrs. A.
"	McGibbon Hotel Main Street	Estate of S. H. McGibbon
GERALDTON	Geraldton Hotel 130 First Avenue	Draper, W. F.
"	Thunder Bay Hotel Main Street	Koleff, K.
GLENCOE	McKellar House Main & McKellar Streets	Loosemore, Mrs. E.
GLEN ORCHARD POST OFFICE	Sherwood Inn	Sherwood Inn Limited

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
GODERICH	Bedford Hotel 132 The Square	Knechtel, Mrs. E. M. and Curry, Mrs. A. E.
"	British Exchange Hotel	Pellow, Mrs. M. G.
"	Royal Hotel Hamilton Street	Estate of Margaret Kelly (Miss M. L. Kelly, Administratrix)
GOGAMA	Gogama Hotel	Giroux, A.
GOLDEN LAKE	Golden Lake Hotel	Layman, C.
GOWGANDA	White House	LaFrance, H. and Mrs. D.
GRAVENHURST	Albion Hotel Muskoka Street	Fletcher, Mrs. E. E.
"	Gilmour Hotel Muskoka Street	Estate of R. P. Powell
GRIMSBY	Grimsby Hotel 30 Main Street, West	Hannah, G. A.
"	Village Inn 57 Main Street, West	Hannah, G. A.
GUELPH	Albion Hotel 49 Norfolk Street	Thompson, Mrs. M. P.
"	King Edward Hotel 2 Wyndham Street	Walsh, W. and Musselman, H. C.
"	New Western Hotel 72 Macdonnell Street	Singular, J. A.
"	Regent Hotel 52 Macdonnell Street	Regent Hotel (Guelph) Limited
"	Royal Hotel 106 Garden Street	Fischer, D. M.
"	Wellington Hotel Wyndham Street	Bristol Hotel Co. Ltd.
HAGAR	Royal Hotel	Roy, C.
HAGERSVILLE	Commercial Hotel King Street	Dubrick, C.
"	New Alward Hotel Main Street	Edmunds, F. C.
HAILEYBURY	Haileybury Hotel Ferguson Avenue	New Temiskaming Hotel Limited
"	Lake Shore Hotel	Boyer, E.
"	Matabanick Hotel	Bulger, Mrs. J. F.
HAMILTON	Armoury Hotel 195 James Street, North	Armoury Hotel Co. Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
HAMILTON	Athletic Hotel 12 Market Square	Murphy, J. J.
"	Avon Hotel 912 Barton Street, East	Smith, L. V.
"	Balmoral Hotel 669 King Street, East	Cowan, Mrs. K.
"	Bayview Hotel 81 Stuart Street, West	Senson, Paul
"	Brightside Hotel 909 Burlington Street, E.	Graham, W. B. P.
"	Britannia Hotel 672 Barton Street, East	Watson, Mrs. J. G.
"	British Empire Hotel 373 Sherman Avenue, N.	Sych, D. and Lorenitis, S.
"	Carlton Hotel 659 King Street, East	Berryman, F. J. and L. F.
"	Cecil Hotel 113 James Street, North	Olivieri, D.
"	Dog & Gun Hotel 295 York Street	Wintonek, D. and Wicinski, J.
"	Dundurn Hotel 452 York Street	Brick, W. J.
"	El-Mar Hotel 163 Main Street, West	Skingley, Mrs. F. W.
"	Fischer's Hotel 51 York Street	Fischer, W. L.
"	Gage Hotel 105 Beach Road	Krzyzan, P.
"	Genessee Hotel 468 James Street, North	Sardo, L.
"	Gladstone Hotel 1385 Main Street, East	Spencer, J.
"	Grand Hotel 5 Gore Street	Ryan, J., Marck, K. and G.
"	Greene's Hotel R. R. 1	Greene, J. J.
"	Curry's Hotel 175 Young Street	Kavanagh, D.
"	Hanrahan Hotel 92 Barton Street, East	Hanrahan, J. J.
"	Homeside Hotel 229 Kenilworth Avenue, North	Rosart, C. J. and Taylor, D.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
HAMILTON	Honest Lawyer Hotel 55 Mary Street	Davey, N. J.
"	International Hotel 309 James Street, North	Martini, D.
"	Iroquois Hotel 94 King Street, West	Hultey, Wm.
"	Jockey Club Hotel 1089 Barton Street, East	Kretschman, J. H. R.
"	Kenilworth Hotel 259 Kenilworth Avenue, North	Walsh, V. J.
"	King George Hotel 27 McNab Street, North	Hamilton Hotel Enterprises, Limited
"	Melba Hotel 410 York Street	Traynor, D. P.
"	Modjeska Hotel 554 James Street, N.	Estate of J. J. Murphy
"	Park Hotel 476 King Street, West	Lorenitis, S. and Sych, D.
"	Piccadilly Hotel 1038 Barton Street, East	Hudecki, L. J. and M.
"	Picton Hotel 183 Picton Street, East	Brugos, George
"	Prince Edward Hotel 737 Barton Street, East	Gral, F.
"	Queen's Hotel 180 Ottawa Street	Fleming, A. J.
"	Regal Hotel 152 King Street, West	Smith, J. G.
"	Royal Connaught Hotel 100 King Street, East	Connaught Hotel Company Limited
"	Royal Hotel 94 McNab Street, North	Labelle, R. J. and Kumpf, C. H.
"	Savoy Hotel 32 Barton Street, East	Oddie, J. A.
"	Sherman Hotel 421 Sherman Avenue, N.	Stecyk, Paul
"	Stafford House Charles & Main Streets	Myatt, W. J.
"	Strand Hotel 262 Dundurn Street, S.	Finch, H. T. and Shadney, Peter
"	Terminal Hotel 180 King Street, East	Bach, H. C.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
HAMILTON	Turbinia Hotel 345 James Street, North	Bencekovich, P. and Holetic, M.
"	Vienna Hotel 152 Gertrude Street	Vasileff, D.
"	Waldorf Hotel 28 Merrick Street	Schwartz, Mrs. H.
"	Waverley Hotel 632 Barton Street, East	Kisil, Wm.
"	Wellington Hotel 161 Wellington Street, N.	Donohue, J. J.
"	Wentworth Arms Hotel Main & Hughson Streets	Munro, Misses A. B. and M.
"	Wentworth Hotel 365 Wentworth Street, N.	Appleyard, Mrs. C.
"	Whitmore Hotel 59 McNab Street, North	Whitmore Hotel Limited
"	Wilson's Hotel 388-390 York Street	Wilson, J.
"	Windsor Hotel 31 John Street, North	J. Ross Fischer Hotels Limited
HAMILTON BEACH	Lakeside Hotel 1151 Beach Boulevard	Perry, Miss G.
" "	New Dynes Hotel 337 Beach Boulevard	Wiwchar, M.
HAMMOND	Junction Hotel	Gendron, A.
HANMER	Joffre Hotel	Cayen, L. B.
HANNON	Plantation Hotel R. R. 3	DeGeer, Mrs. L. A.
HANOVER	Hanover Inn Durham Road	Kormann, H. L.
"	Queen's Hotel Durham Road	Francis, Mrs. L. L.
"	Union Hotel	Deratnay, E.
HARRISTON	Coronation Hotel Elora Street	Watier, J. E.
"	Royal Inn Elora Street	Parke, G. E. and G. M.
HASTINGS	Royal Hotel Bridge & Water Streets	Jones, E. W.
HAWKESBURY	Bridge Inn 139 Main Street, West	Montpetit, O.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
HAWKESBURY	King Edward Hotel	Lalaonde, E. J.
"	Royal Hotel 24 Main Street, West	Martineau, O.
HAWK JUNCTION	Hawk Junction Hotel	Flanagan, Wilfred G. and Lillian V.
HEARST	Palace Hotel Ninth Street	Charpentier, F.
"	Queen's Hotel Ninth Street	Knipprath, H.
"	Waverley Hotel	Groothelm, E.
"	Windsor Hotel	Dupont, R. and Chabot, L.
HEIDELBERG	Olde Heidelberg Inn	Giesler, H. C.
HENSALL	New Commercial Hotel	Tudor, S.
HEPWORTH	Royal Hotel Queen Street	Bonser, Robt. A.
HERON BAY	North Shore Hotel	North Shore Hotel Co. Limited
HESPELER	Hespeler Hotel	Jaras, Martin
"	Queen's Hotel	Cornell, J. S.
HIGHLAND CREEK	Highland Inn	Maxwell, W.
HILTON BEACH	Hilton Beach Hotel	Wells, S.
HOLTYRE	LaSalle Hotel	LaSalle, J. P.
HONEY HARBOUR	Delawana Inn	Grise, F. S. and G. E.
" "	Royal Hotel	Grise Bros. Limited
HORNEPAYNE	Hornepayne Hotel	Easton, Mrs. F.
"	Taylor's Hotel	Taylor, R. J. and Mrs. A. M.
HUDSON	Grandview Hotel	Gastmeier, R. J.
HUMBER BAY	Hollywood Hotel Queen & Wesley Streets	Gentile, F.
" "	Humber Hotel 63 Lakeshore Road	Begley, J. and Estate of W. A. Taylor
HUMBERSTONE	Duke's Hotel 154 Main Street	Offord, A. G.
"	Western Hotel 129 Main Street	Reeb, W. G.
HUNTSVILLE	Bayview Hotel 100 Main Street	Dopper, T. S.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
HUNTSVILLE	Dominion Hotel Main Street	Stirling, Mrs. L.
IGNACE	Ignace Hotel Front Street	Smilsky, Wm.
IRON RIDGE	Rod & Gun Hotel	Milligan, C. E. and E.
ISLINGTON	Islington Hotel 4922 Dundas Street, West	Estate of Mrs. E. E. McDonnell
"	Six Points Hotel 5179 Dundas Street, West	H. F. Fleury Co. Ltd.
JACKFISH	Lakeview Hotel	Spadoni Bros. Ltd.
JACKSON'S POINT	Lake Simcoe Hotel	Gilbey, W. E.
" "	Kenwood Hotel	Farrell, J.
JAMOT	Beausejour Hotel	Bouverat, J. P. L.
JARVIS	Jarvis Hotel	Slack, W. R.
JASPER	Jasper Hotel	Watson, B.
JONES FALLS	Kenney Hotel	Kenney, Thos. J.
JORDAN	Dwarf Village Inn	Bolus, Mrs. E.
"	Jordan Inn	Harding, E. W.
KALADAR	Kaladar Hotel	Brydson, Mrs. I. M.
KAPUSKASING	Commercial Hotel 5 O'Brien Avenue	Desgrosielliers, C.
"	Empire Hotel 30 Henderson Avenue	Paquette, J.
"	Kapuskasing Inn	Spruce Falls Power and Paper Co. Ltd.
"	Plaza Hotel Queen & Dallyn Streets	Godin, C. M.
"	Radio Hotel Henderson & O'Brien Sts.	Spooner, F. J.
"	Sunshine Hotel	Lefebvre, A.
KEARNEY	Kearney Hotel	Whittaker, J.
KEARNS	Park Hotel (New)	Ferianz, M. and Korbel, J.
KEEWATIN	Bay City Hotel Front & Main Streets	Rochon, Mrs. G.
"	Lakeshore Hotel	Grendys, W.
KENOGAMI LAKE	Kenogami Hotel	Malnerich, P.
KENORA	Commercial Hotel 101 Chipman Street	Pidlubny, G. and Barrieau, J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
KENORA	Dalmore Hotel Main Street	Estate of J. W. Sauerbrei
"	Kenricia Hotel Main & Second Streets	Kenricia Hotel Company Limited
"	Lake of the Woods Hotel 132 Matheson Street	Corneillie, H.
"	Ottawa Hotel 219 Matheson Street, S.	McKay, R.
KEYSTONE ISLAND	Keystone Camps (New)	Fischer, R. S. and Chas.
KILLALOE STATION	Beresford Hotel Queen & Lake Streets	Hanson, C. R.
KING KIRKLAND	King Kirkland Hotel	Lapierre, A.
KINGSTON	British American Hotel 42-52 Clarence Street	Megaffin, N. D. and Epstein, L. W.
"	Frontenac Hotel 178 Ontario Street	Hyde, H. A.
"	Grand Hotel 76 Princess Street	McGall, T.
"	LaSalle Hotel Bagot Street	Randolph Hotel Co. Ltd.
"	Plaza Hotel 46 Montreal Street	Johnson, H. M.
"	Prince George Hotel 200 Ontario Street	Fitton, Mrs. S. L.
"	Queen's Hotel 125 Brock Street	Berrigan, T., E. A., and M. J.
"	Royal Hotel 342 Princess Street	Kingston Hotel Co. Ltd.
"	New Windsor Hotel 205 Princess Street	Gilmour, Mrs. J. S.
KINGSVILLE	Kingsville Hotel Main Street	Vassar, J. S., A. A., and Weir, Bert
"	Mettawas Hotel Park Street	Mettawas Hotel Co. Ltd.
KIRKLAND LAKE	Bellevue Hotel 2 Taylor Avenue	LaPointe, R.
" "	Capitol Hotel 60 Second Street	New Townsite Hotel Co. Ltd.
" "	Charlie's Hotel 34 Government Road, W.	Chow, C.
" "	Federal Hotel Federal & Day Streets	Beauchesne, J. O.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
KIRKLAND LAKE	Franklin Hotel 60 Government Road, W.	Bedner, P. J.
" "	Gold Range Hotel 45 Government Road, W.	Atkins, B.
" "	Kirkland Lake Hotel 55 Government Road, W.	Elliott, H. E.
" "	Link Club Hotel (New) 4 Government Road	Lingenfelter, W. J.
" "	Park Lane Hotel 2 Government Road, W.	Princess Hotel Limited
" "	Prince George Hotel 95 Government Road	Desgroseilliers, C.
" "	Princess Hotel 1 Government Road, W.	Princess Hotel Limited
" "	Queen's Hotel 40 McCamus Avenue	Desgroseilliers, L.
" "	Union Hotel (New) 9 Main Street	Pavlakovich, F. and Michelcic, Joseph
" "	Windsor Hotel 43 Government Road, W.	Kaplan, H.
" "	York Hotel 8 Main Street	Northern Hotel (Kirkland Lake) Ltd.
KITCHENER	American Hotel 1 Queen Street, North	Wagner, M.
"	East End Hotel 312 King Street, East	Mihiloff, E.
"	Grand Union Hotel 130 King Street, West	Wismer, A. O.
"	Kitchener Hotel 101 King Street, East	Kitchener Hotels Limited
"	Mayfair Hotel 11 Young Street	Mayfair Hotel Limited
"	Station Hotel 122 Weber Street, West	Chris, S.
"	Walper Hotel 1 King Street, West	Kitchener Hotels Limited
"	Windsor Hotel 168 King Street, West	Estate of C. J. Bruder
LAMBTON	Lambton Hotel 4062 Dundas Street, W.	Thomson, C. P. and Fraser, R. G.
LANCASTER	Commercial Hotel	Leigh, Maurice

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
LARDER LAKE	Grainger Hotel 205 Godfrey Street	Grainger, J. H.
" "	Larder Lake Hotel	Dobrijevich, I.
LaSALLE	Chateau LaSalle Front Road	Lavin, John H.
"	Sunnyside Hotel	Terpankis, D.
LATCHFORD	Lady Evelyn Hotel	Burns, M.
LAVIGNE	Lavigne Hotel	Martin, J. R.
LEAMINGTON	Auto Stop Inn	Vlasic, I.
"	International Hotel 35 Erie Street, South	Estate of H. A. Shamess
"	Leamington Hotel	Brown, M.
"	Seacliffe Hotel Erie Street, South	Seacliffe Hotel Limited
LEFAIVE	Pregent Hotel	Pregent, A.
LINDSAY	Benson House 24 Kent Street	Egan, R. V. and Dawe, W. A.
"	Central Hotel 7 William Street, South	Maunder, D. J.
"	Grand Hotel 171 Kent Street, West	Bland, Sam
"	Kent Hotel 34 Lindsay Street, South	Parkin, S., Muzyka, J. and Pary, W.
"	New Royal Hotel 2 Kent Street	Adam, J. S. and Fralick, C. A.
LINWOOD	Linwood Hotel	Thompson, R. L.
LISTOWEL	Royal Hotel Wallace Street	Fischer, J. R.
"	York Hotel Main Street	Fischer, J. R.
LONDON	Belvedere Hotel 1033 Dundas Street	Parsons, A.
"	Brunswick Hotel 331 Talbott Street	Herbert, W. H.
"	C.P.R. Hotel 671 Richmond Street	Richardson, Mrs. E.
"	Clarendon Hotel 367 Talbot Street	Deratnay, M.
"	Esquire Hotel 372 Dundas Street	Aitken, G. S.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
LONDON	Fraser Hotel 183 King Street	Fraser, A and G.
"	Grigg House York & Richmond Streets	Vallance, F. T.
"	Harvey Hotel 750 Hamilton Road	Vassar, A. A., J. S., and Weir, B.
"	Iroquois Hotel 367 Clarence Street	Downey, D. M.
"	London Hotel 279 Dundas Street	London Realty Company Limited
"	London House Hotel 415 Talbot Street	Brennan, Mrs. M. M. and Clark, Mrs. A. M.
"	Mayfair Hotel 89 King Street	Wakeam, A. K.
"	Oxford Hotel 769 Adelaide Street	Mayor, M. J.
"	Park Hotel 920 Dundas Street	Deeside Holdings Limited
"	Queen's Hotel 763 Dundas Street	Jones, J. W.
"	Richmond Hotel 370 Richmond Street	Cook, W. L.
"	Ridout Hotel 346 Ridout Street	Kelly, B. L.
"	St. Regis Hotel 625 Dundas Street	Jacques, H. A.
"	Savoy Hotel 398 Clarence Street	Vassar, J. S., A. A., and E. C.
"	Sunnyside Hotel 732 Dundas Street	Hassan, A.
"	Victoria Hotel 466 Ottaway Avenue	Ginsberg, H.
"	Wellington Hotel 267 Bathurst Street	Escaf, R.
"	York Hotel 216 York Street	Assaf, A.
LONG BRANCH	Eastwood Park Hotel 1585 Lakeshore Road	Laurent, P. G.
" "	Long Branch Hotel	Wright, S. T.
LONG LAC	Long Lac Hotel	Gaffney, T. J. and Mrs. A.
LORETTO	Loretto Hotel	McCabe, Mrs. M. and Wilson, W. J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
L'ORIGNAL	Riverview Hotel	Dubois, Florent
LUCAN	Central Hotel Main Street	Parker, J. S.
MADOC	Blue's Hotel Durham Street	Blue, L. C.
MAGNETAWAN	Schmeler Hotel	Schmeler, W. E.
MALDEN	Meadows Hotel	Meadows Hotel Limited
MALDEN TOWNSHIP	Lake Shore Hotel R.R. 2, Amherstburg	Kilgallin, T. V. and Ouellette, W. J.
MARATHON	Everest Hotel (New)	Harbour Heights Ltd.
MARKSTAY	Markstay Hotel	Hillman, H. and St. Denis, J. N.
MARLBANK	O. K. House Queen Street	Schell, S. P.
MARMORA	Royal Hotel Forsyth Street	Neath, H. J.
MARTIN LAKE	Beaverland Hotel	Handley, A. J. J.
MARYHILL	Commercial Hotel	Halter, T., E., I., T., C., and W.
"	Scherrer Hotel	Scherrer, Mrs. M.
MARYSVILLE	Marysville Hotel	Fahey, J. V.
MASSEY STATION	Clifton Hotel	Estate of H. J. McNenly
MATACHEWAN	Park Hotel	Dalpe, J. A.
"	Radio Hotel	Bergeron, J. C.
"	Riverview Hotel	Crow, S. A.
MATTAWA	Mattawa Hotel	MacKechnie, Mrs. K.
"	Trans-Canada Hotel	Morel, Mrs. B.
MAYNOOTH	Arlington Hotel	Painter, Wm. B.
McGREGOR	McGregor Hotel	Tiffin, L.
McINTOSH SPRINGS	McIntosh Hotel	Tremblay, H.
McKENZIE ISLAND	Gold Eagle Hotel	Gold Eagle Hotel Co. Ltd.
McKERROW	McKerrow Hotel (New)	Dominic, Alex
MEADOWSIDE	Meadow Inn	Renaud, H.
MERRICKVILLE	Louis Hotel St. Lawrence Street	Crawford, G. R.
MERRITTON	Merritton Hotel 157 Merritt Street	Ricci, Mrs. D.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
MERRITTON	Union Hotel 123 Merritt Street	Hallett, Mrs. I.
MILDMAY	Commercial Hotel	Houghton, J.
"	Station Hotel	Weatherhead, C. T.
MILFORD BAY	Baycliff Inn	Campbell, J. H.
MILLE ROCHE	Ernie's Hotel	Runions, E. N.
MILTON	Kennedy Hotel Main Street	Kennedy, Mrs. R.
"	Milton Inn Main Street	Armstrong, F. W.
MILVERTON	Winston Hotel Main Street	McNair, A. D.
MIMICO	Sagamore Hotel 160 Lakeshore Road	Doughty, Mrs. B. J.
"	Windsor Hotel 15 Vincent Street	Ryan, V. G.
MINAKI	Holst Point Hotel	Smith, H. E. and Ritz, Mrs. G.
MINDEN	Dominion Hotel	Watson, K. B.
"	Rockcliffe Hotel	Campbell, Mrs. M. and Winch, L. S.
MINE CENTRE	Mine Centre Hotel	Estate of Mrs. M. Law
MINETT	Paignton House	Pain, R. D.
MISSANABIE	Kinahan's Hotel Curran Street	Kinahan, F. M.
MITCHELL	Hicks House Huron Street	Taylor, Mrs. M. S.
"	Collison House Main Street	Dungey, W. J.
"	Royal Hotel Huron Street	Cox, J. J.
MITCHELL'S BAY	Mitchell's Bay Inn	Pinsonneault, L.
MORRISBURG	Riverside Hotel	Geach, R. W.
"	St. Lawrence Hall Hotel Main & Lock Streets	McGannon, W. A. and Mrs. K.
"	Windsor Hotel Lock Street	Ouderkirk, P. E.
MOULINETTE	Lion Hotel	Whiteside, T. D.
MOUNT FOREST	Belmont Hotel	Collins, M. J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
MOUNT FOREST	Kent Hotel Main Street	Thorlby, G. E.
" "	Mount Royal Hotel Main Street	Hahn, O. J.
NAIRN CENTRE	King George Hotel McIntyre Street	Zangari, N. G.
NAKINA	Nakina Hotel Railway Avenue	Ellis, E. F.
NAPANEE	Campbell House Dundas Street	Luffman, M. B.
"	Paisley Hotel John Street	Tyson, Edward and Mrs. Jessie A.
"	Queen's Hotel John Street	Munroe, Mrs. M.
"	Richelieu Hotel Dundas Street	Goodridge, S. D.
NEUSTADT	Commercial Hotel Hill Street	Himmelspach, J. P.
"	Locust Inn	Griffiths, Mrs. E. C.
NEWCASTLE	Elmhurst Hotel	Purdy, Mrs. M.
"	Queen's Hotel	Byras, Limited
NEW DUNDEE	Barton's Inn Main Street	Barton, A. E.
NEW HAMBURG	Commercial Hotel	Paul, Stanley
" "	Imperial Hotel	Clayton, J.
" "	King Edward Hotel Waterloo Street	Zimmerman, G. T.
NEW LISKEARD	Grand Union Hotel Whitewood Avenue	Evans, Leonard S.
" "	Windsor Hotel Armstrong Street	MacLean, A.
NEWTONBROOK	Algonquin Hotel	Zayats, A. and Zaraska, W.
NEW TORONTO	Almont Hotel 1072 Lakeshore Road	Almont Hotel Limited
" "	New Toronto Hotel 781 Lakeshore Road	Lavelle, H. J.
NIAGARA FALLS	Belleview Hotel 499 Ferguson Avenue	Distilio, A.
" "	Bon Villa Hotel 2565 Lundy's Lane	Allen, S. L.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
NIAGARA FALLS	Caverley Hotel 816 Bridge Street	Badovinac, E.
" "	Clifton Inn 955 Clifton Hill	Benson, W. P. and Gillespie, Alan C.
" "	Elliott Hotel 573 Queen Street	Sanson, A. V.
" "	Empire Hotel 238 Bridge Street	Stawchan, M.
" "	Erie Hotel 356 Bridge Street	Zinkewich, M.
" "	Fox Head Inn Clifton Hill	Fox, Mrs. E. M.
" "	General Brock Hotel 1685 Falls Avenue	General Brock Hotel Company Limited
" "	Imperial Hotel 290 Bridge Street	Doyle, E. J.
" "	King Edward Hotel 659 Clifton Avenue	Mark Egan Hotels Ltd.
" "	Maple Leaf Hotel 1831 Ferry Street	McGarry, T. W.
" "	Metropole Hotel Bridge Street	Cohen, Max and Dawe, William A.
" "	Niagara Hotel 1008 Centre Street	Campaigne, C. W.
" "	Park Hotel Queen Victoria Park	Niagara Parks Commission
" "	Prospect Hotel 1951 Main Street	Prospect House Limited
" "	Rapids Hotel 67 River Road	Pepe, J.
" "	Stevens Hotel 152 Bridge Street	Vukmanich, C.
" "	Venetian Hotel 1355 Ferry Street	Briand, J.
NIAGARA-ON-THE-LAKE	American Hotel	Hartzig, M.
"	Prince of Wales Hotel Picton Street	Sadowey,
"	Riverside Hotel	Stevens, Bernard
NIPIGON	International Hotel Main Street	DeFazio, Mrs. M.
"	Nipigon Inn	Hogan, W.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
NIPIGON	Ovilio Hotel Front & Third Streets	Gentile, D.
NOELVILLE	Lafayette Hotel	Daoust, A.
"	LaSalle Hotel	Bergeron, E.
NORMAN	Norman Hotel Bay & Ontario Streets	Rychlo, A.
NORTH BAY	Continental Hotel 72 Main Street	Kerrigan, S. A.
" "	Empire Hotel Fraser & McIntyre Sts.	Empire Hotel Co. of Timmins Limited
" "	King George Hotel 1 Ferguson Street	Brazeau, W.
" "	Parkview Hotel 14 Oak Street, West	Chirico, A.
" "	St. Regis Hotel Main & Klock Avenue	Mason, W. E.
NORTHBROOK	Northbrook Hotel	Courneya, V. C. and E. J.
NORVAL	Hollywood Hotel	Ward, Mrs. E. F.
OAKVILLE	Halton Inn 48 Colborne Street	Megaffin, B. A.
"	New Murray Hotel	Gordon, J. R.
"	Oakville Hotel Navy & Colborne Streets	Gray, G. D.
"	Oakville Inn	Busk, N. O.
OBA	Alexander Hotel	Stoyka, A.
"	Oba Hotel	Vihonen, L. P.
ORIENT BAY	Royal Windsor Lodge	Beamish, J. H. and Fraser, A. E.
ORLEANS	Orleans Hotel	Laflamme, E.
OSHAWA	Central Hotel 9 King Street, West	Henry, E. M., McCrohan, K., Chambers, A. L. and McCrohan, M.
"	Commercial Hotel	Commercial Hotel (Oshawa) Limited
"	Genosha Hotel 70 King Street, East	Hotel Genosha Limited
"	Queen's Hotel 67 Simcoe Street, West	McTaggart, Mrs. G. M.
"	Cadillac Hotel (New) 394 Simcoe Street, South	Vassar, Saliste S.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
OTTAWA	Albion Hotel 1 Daly Avenue	Laframboise, Mrs. S.
"	Alexandra Hotel 352 Bank Street	Alexandra Operating Co. of Ottawa Limited
"	Belle Claire Hotel 227 Queen Street	MacMillan, H. C.
"	Belmont Hotel 90 Lyon Street	Estate of Thomas Fleming
"	Bytown Inn 71 O'Connor Street	Brigham, T. G.
"	Canada Hotel 62 Murray Street	Menard, Mrs. A. D.
"	Capital Hotel 202 Rochester Street	Antrim Hotels Limited
"	Capitol Hotel 221 Rideau Street	Weiss, B.
"	Carleton Hotel 223 Armstrong Street	Viau, J. A. P. and Starr, H. W. J.
"	Castor Hotel 451 Sussex Street	Chevrier, E.
"	Chateau Lafayette 44 York Street	Bouris, J., G., and M.
"	Chateau Laurier Rideau Street	Canadian National Railways
"	City Hotel 46 Clarence Street	Raymond, E. J.
"	Commercial Hotel 73 York Street	Viau, E.
"	Dominion Hotel 28 York Street	Cyr, Elie
"	Duke Hotel 99 Duke Street	Korsa, N.
"	Dunkirk Hotel 64 Metcalfe Street	Dunkirk Hotel Limited
"	Elmdale Hotel 1084 Wellington Street	Laroche, Horace and Lionel, Executors of Estate of Ernest Laroche
"	Gilmour Inn 363 Bank Street	Gilmour Inn Limited
"	Grad's Hotel 143 Cambridge Street	Grad's Hotel (Ottawa) Limited

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
OTTAWA	Grand Hotel 555 Sussex Street	Delorme, L.
"	King Edward Hotel 599 Sussex Street	Terminal Hotels Limited
"	La Salle Hotel 245 Dalhousie Street	Lepine, Mrs. O.
"	Lord Elgin Hotel 100 Elgin Street	Ford Hotel Company of Ottawa Limited
"	Pacific Hotel 171 Broad Street	Dore, L.
"	Palace Hotel 181 Broad Street	Viau, T.
"	Plaza Hotel 223 Sparks Street	Plaza Hotel Company Limited
"	Prescott Hotel 371 Preston Street	Prescott Hotel Company Limited
"	Rex Hotel 42 Clarence Street	Barbeau, O.
"	Richelieu Hotel 62 York Street	Lepine, Mrs. C.
"	Rideau Hotel 191 Rideau Street	Viau, O.
"	Ritz Hotel 352 Somerset Street, West	Ottawa Ritz Hotel Company Limited
"	Royal Hotel 255 Rideau Street	Davis Hotel Company Limited
"	Russell Hotel 596 Sussex Street	Russell Operating Company Limited
"	St. Charles Hotel 200 Queen Street	St. Charles Hotel Limited
"	Stirling Hotel 123 Stirling Avenue	Stirling Hotel (Ottawa) Limited
"	Vendome Hotel 844 Somerset Street, W.	Kingsbury, G. R.
"	Victoria Hotel 34 Murray Street	Charos, P. G.
"	Windsor Hotel 35 Metcalfe Street	Windsor Hotel (Ottawa) Limited
PAINCOURT	Central Hotel	King, Mrs. G.
"	Dover Hotel	Trahan, V. S.
PALMERSTON	Hess Hotel	Hammond, Mrs. R. E.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
PALMERSTON	Queen's Hotel Queen Street	Jaegar, L.
PARIS	Arlington Hotel 106 Grand River Street	Ealand, Misses E. M. and M. B.
"	Canadian Hotel 27 Dunfries Street	Robb, W. B. Sr.
"	Hayes Hotel 26 Mechanic Street	Hayes, G. E.
"	New Royal Hotel 11 Mechanic Street	Hynes, J. W.
PARRY SOUND	Kipling Hotel Emily Street	Empire Hotel Company of Timmins Limited
" "	New Belvedere Hotel	Peebles, A. G. and Kehoe, C. W.
PEFFERLAW	Belvedere Hotel	Beliski, J. P.
PELEE ISLAND	Pelee Hotel	Holtze, L. C.
PEMBROKE	Copeland Hotel 48 Pembroke Street, West	Copeland Hotel Company Limited
"	Leland Hotel 196 Albert Street	Needham, D. J.
"	Mackey House 185 Pembroke Street, E.	Costin, E. R.
"	Pembroke Hotel 200 Pembroke Street	Teevens, J. B.
"	Windsor Hotel 147 McKay Street	Cecile, Mrs. B.
PENETANGUISHENE	Brule Hotel Main Street	Beauchamp, N.
"	Canada House 85 Main Street	Allen, J. D. and Renton, A. E.
"	Northern Hotel Main Street	Weegar, C. W. and Smart, W. E.
PERTH	Imperial Hotel 25 Wilson Street	Lambert, Mrs. E. E.
"	Perth Hotel 1 Gore Street, West	Duby, H. D.
"	Revere Hotel 78 Foster Street	Salisbury, S. R.
PETERBOROUGH	American Hotel 189 Hunter Street	Blodgett, Mrs. P.
"	Champlain Hotel 173 Charlotte Street	McGillis Hotel Co. Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
PETERBOROUGH	Empress Hotel 131 Charlotte Street	Empress Hotel (Peterborough) Limited
"	Grand Hotel 295 George Street	Emerson, L. S. and Crawford, S. B.
"	King George Hotel 172 Simcoe Street	Keeler, I. B. and Tanner, Ray
"	Montreal House 282 Aylmer Street	Loucks, J.
"	Queen's Hotel 181 Simcoe Street	King, N. D. and V. L.
"	Windsor Hotel 144 Brock Street	Johnston, Mrs. S. M.
PETERSBURG	Blue Moon Hotel	Forler, H. G.
PHELPSTON	Phelpston Hotel	Kenny, D. J.
PICKERING	Rouge Valley Inn R.R. 2,	Griffin, Mrs. P. F.
PICKLE CROW	Pickle Crow Hotel	Pickle Crow Hotel Ltd.
PICKLE LAKE	Pickle Lake Hotel	Koval, K.
PICTON	Globe Hotel Main Street	Cox, J. J.
"	Royal Hotel Main Street	Healy, F. E. and E. J.
PIGEON RIVER	Pigeon River Hotel	Hurtig, M.
PLANTAGENET NORTH	Commercial Hotel	Gauthier, W. J.
POINT EDWARD	Balmoral Hotel 123 Michigan Avenue	Mara, F. J.
PORCUPINE	Palmour Hotel King Street	Perla, D.
PORQUIS JUNCTION	Canada Hotel	Tremblay, S.
PORT ARTHUR	Canadian Northern Hotel 130 Cumberland Street, S.	Erikkila, I. A. and Milton, P.
" "	Hodder Avenue Hotel 479 Hodder Avenue	Sisco, J.
" "	Kimberley Hotel 191 Pearl Street	Burstrom, G.
" "	Lakeland Hotel 84 Cumberland Street, S.	Domanski, J.
" "	LaPrade Hotel 102 Cumberland Street, S.	LaPrade, J. T.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
PORT ARTHUR	Mariaggi Hotel 28 Water Street, South	Hurtig, M.
" "	New Ontario Hotel 219 Arthur Street	Arthur, Mrs. M.
" "	Prince Arthur Hotel 9 Cumberland Street	Canadiaan National Railways
" "	Princess Hotel 76 South Cumberland St.	Filipovic, J.
" "	Royalton Hotel (New) 248 Bay Street	Baccari, Mrs. C.
" "	Vendome Hotel 125 Cumberland Street, S.	Burstrom, J. C.
" "	Waverley Hotel 54 North Cumberland St.	Kelly, J. J.
PORT COLBORNE	Belmont Hotel King & Charlotte Streets	Holman, A. A.
" "	Colonial Hotel 124 West Street	Milligan, H. F.
" "	Commercial Hotel 240 West Street	Shibley, J. H.
" "	Gas Line Hotel R.R. 1	White, O. W.
" "	Queen's Hotel 19 Omar Street	Radvilas, J.
" "	Ritz Hotel 201 Welland Street	Farrarelli, Mrs. P.
" "	Star Hotel 264 West Street	Sheppard, W. J.
PORT DALHOUSIE	Austin Hotel 16 Lock Street	Austin Hotel Limited
" "	Embassy Hotel	Long, L.
" "	Port Hotel	Chaikowski, O. and Kmit, Y.
PORT DOVER	Commercial Hotel	Montgomery, L. A.
" "	Norfolk Hotel	Gamble, C. E.
" "	Erie Beach Hotel	Brugos, Mrs. M. and Almassy, G.
PORT ELGIN	Arlington Hotel	McGrath, E.
" "	Queen's Hotel	McPherson, R.
PORT HOPE	Ontario Hotel 30 Ontario Street	Powell, B. H.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
PORT HOPE	Queen's Hotel 81 Walton Street	Overholt, H. F.
" "	St. Lawrence Hotel 91 Walton Street	Halick, J.
PORT MAITLAND	Maitland Arms Hotel	Murphy, A. C.
PORT ROWAN	Baycliffe Hotel Main Street	Pickerd, Mrs. M.
" "	St. Charles Hotel Main Street	Vanthuyne, A.
PORT SEVERN	Bayview House	Brown, Mrs. E. M.
PORTSMOUTH	Portsmouth Hotel 402 Young Street	Beaupre, P. M.
PORT STANLEY	Clifton Hotel	Sturgis, C. E.
" "	Hill Crest Inn	Shipp, Mr. and Mrs. S. P.
" "	Plaza Hotel William Street	Kohn, Samuel
" "	Why Not Hotel	Weir, Mrs. D.
POWASSAN	Windsor Hotel	LaLonde, C. J.
PRESCOTT	Queen Alexandra Hotel King Street	Horan, E. T. and J. T. and White, E. T.
"	Daniels Hotel (New)	Korsa, Nicholas
PRESTON	Central Hotel 868 King Street	Taylor, S. A. and Dawe, W. A.
"	Commercial Hotel 991 King Street	Forler, H. G.
"	Queen's Hotel 1102 King Street	Schmalz, A. J.
"	Sulphur Springs Hotel 240 King Street	Markus, J.
PUCE	Emery's Corners Hotel R.R. 1	Anton, J.
RAINY RIVER	Canadian Northern Hotel Atwood Avenue	Popowich, Wm.
" "	Rainy River Hotel	Makarchuk, Mrs. A.
RAMORE	Commercial Hotel	Bienvenu, J.
"	Ramore Hotel Railway Street	Delves, G. W.
RED LAKE	McCuaig Hotel	McCuaig (Red Lake) Hotel Co. Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
RED ROCK	Red Rock Inn	Brompton Pulp and Paper Company Limited
RIDGETOWN	Arlington Hotel	Campbell, W. T.
RIDGEWAY	McLeod House	Rice, P. A.
"	Ridge Inn Hotel	Kisielis, A.
RIVER CANARD	Marion Inn	Dumouchelle, Mrs. P.
" "	Palm Beach Hotel	Desjardin, Mrs. A.
RIVERSIDE	Edgewater Hotel 4912 Riverside Drive	Thomas' Inn Limited
"	Island View Hotel 3342 Riverside Drive	Island View Hotel Company Limited
"	Menard's Inn 196 Riverdale Avenue	Menard, Mrs. V.
"	Lauzon Stop Inn 3340 Ottawa Street	Bacon, G.
"	Rendezvous Hotel 7324 Riverside Drive	Vuicic, C.
RIVER VALLEY	Golden Rose Hotel Main Street	Giroux, A. J.
ROCKLAND	King George Hotel 143 Laurier Street	Gamelin, A.
"	Rockland Hotel	Viau, A.
"	Russell Hotel	Menard, F. X.
ROSSEAU	Monteith Inn	Shopsowitz, Harry
ROSSPORT	Rossport Inn	Anderson, O.
ROUGE HILLS	Glen Eagles Manor	Dnieper, Peter
ROYAL MUSKOKA POST OFFICE	Royal Muskoka Hotel	Muskoka Lakes Navigation & Hotel Co. Ltd.
RUSSELL	Commercial Hotel	Kiedyk, W. and Mrs. M.
"	Russell Hotel Mill Street	Sculland, M. Frank
ST. AGATHA	Prince of Wales Hotel	Kittell, H. E.
ST. ALBERT	Russell House	Lauzon, A.
ST. ANNE DE PRESCOTT	Commercial Hotel	Diotte, R.
ST. CATHARINES	City Hotel 131 King Street	Taube, O. and Cohen, B. M.
" "	Esquire Hotel 88 Queenston Street	Aitken, Mrs. M.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ST. CATHARINES	Franklin Hotel 2 Pelham Street	Rosar, F. N.
" "	Garden City Inn 19 James Street	Springford, R.
" "	International Hotel 84 James Street	Garbutt, Mrs. I. N.
" "	Leonard Hotel 259 St. Paul Street	St. Catharines Hotels Ltd.
" "	Lincoln Hotel 288 St. Paul Street	McConnell, Mrs. N. R.
" "	Mansion Hotel 5 William Street	Mansion Hotel (St. Catharines) Limited
" "	New Murray Hotel 58 James Street	Lachapelle, L. A.
" "	New Statler Hotel 70 James Street	Harding, R.
" "	Ontario Hotel 244 Ontario Street	Bagdasarian, M.
" "	Queensway Hotel 8 Queenston Street	Queenston Hotels Limited
" "	Russell Hotel 203 St. Paul Street	O'Keefe, W.
" "	Welland House 30 Ontario Street	Welland House Limited
" "	York Hotel 170 York Street	York (St. Catharines) Hotel Limited
ST. CHARLES	St. Charles Hotel	Dambrauskas, G.
ST. CLEMENTS	St. Clements Hotel Main Street	MacDermott, G.
ST. EUGENE	Windsor Hotel	Landriault, A.
ST. ISIDORE DE PRESCOTT	Central Hotel	Lalonde, C.
ST. JACOBS	Dominion Hotel King Street	Sieling, H. A.
ST. JOACHIM	St. Joachim Hotel	Rockburn, Harvey
ST. MARY'S	Garnet House Church Street	Oddy, Miss F.
" "	Royal Edward Hotel 7 Queen Street	Pinney, Mrs. T. G.
" "	Windsor Hotel Queen Street	Graham, Mrs. O. M.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ST. ONGE	Commercial Hotel	Brisson, H. A.
ST. THOMAS	Brunswick Hotel 925 Talbot Street	Collins, Mrs. M.
" "	Empire Hotel 664 Talbot Street	Watts, Mrs. W.
" "	Grand Central Hotel 336 Talbot Street	Hunter, H. C.
" "	International Hotel 825 Talbot Street	Turner, L.
" "	Park House Hotel 95 Wilson Avenue	Cornfoot, D. H.
" "	Royal Hotel 218 Talbot Street	Paddon, R. C.
" "	Queen's Hotel 741 Talbot Street	Deratnay, M.
" "	Scott's Hotel 755 Talbot Street	Scott, Mrs. D.
" "	Talbot Hotel 593 Talbot Street	Conley, Mrs. M.
" "	Taylor's Hotel 701 Talbot Street	Taylor, A. A.
	Western Hotel 87 St. Catharines Street	Turner, D. J. L. and Hahn, G. K.
SALTFLEET TOWNSHIP	Derby Inn	Neichenbauer, E. and Varyu, N.
SANDWICH EAST	Airport Inn Walker Rd. & Highway 2	Sexton, A.
" "	Canada Hotel 5923 Tecumseh Road	Dengel, Mrs. K.
" "	Samson Hotel 2508 Tecumseh Road	Fleming, A. J.
" "	Lappan Hotel 1101 Walker Road	Lappan, R. J.
SANDWICH WEST	Sand Hill Hotel R.R. 1	Bessette, H.
SARNIA	Colonial Hotel 156 Christina Street	Morrison, J. F.
"	McFee's Hotel 182 Cromwell Street	McFee, Mrs. A.
"	Morden Hotel 163 Front Street, North	Morden, H. E.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
SARNIA	Sarnia Hotel 234 Front Street, North	Martin, H. D.
“	Vendome Hotel 124 Front Street, North	MacFarlane, G. B.
“	Windsor Hotel 210 Christina Street, N.	Taylor, C. L.
SARSFIELD	Sarsfield Hotel	Raymond, R.
SAULT STE. MARIE	Algoma Hotel 285 Queen Street, East	Cohen, W. M. N.
“ “ “	Algonquin Hotel 864 Queen Street, East	Paterson, P. W.
“ “ “	Central Hotel 458 Queen Street, East	Breton, Mrs. L.
“ “ “	Empire Hotel 196 James Street	Milkovich, V. and Sambol, J.
“ “ “	Grand View Hotel 331 Queen Street, East	Brunette, F.
“ “ “	International Hotel 141 Huron Street	Signoretti, A.
“ “ “	Lock City Hotel 874 Queen Street, East	Petroni, E. M.
“ “ “	New American Hotel 602 Bay Street	Camaroli, E.
“ “ “	New Ontario Hotel 89 Hudson Street	Juzwow, J.
“ “ “	New Toronto Hotel 193 James Street	Culina, J.
“ “ “	Nicolet Hotel 304 Albert Street, West	Saari, Mrs. F. A.
“ “ “	Royal Hotel 2 Queen Street, East	Keenan, B. P.
“ “ “	Victoria Hotel 82 Pim Street	Chow, H.
“ “ “	Windsor Hotel 607 Queen Street, East	Sault Windsor Hotel Ltd.
SAVANT LAKE	Savant Hotel	Haverluck, J.
SCARBORO	Alpine Hotel 1102 Kingston Road	McLarney, W. M. and McNamara, Mrs. F. A.
“	Mansion House 3313 Danforth Avenue	Mansion House (Toronto) Limited
SCARBORO JUNCTION	Scarboro Hotel 8 Danforth Road	Trusler, M. S.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
SCHUMACHER	Emporium Hotel (New) 20 First Avenue	Bosak, Peter
"	Eldorado Hotel 12 First Avenue	Pupich, C.
"	Gold Range Hotel 44 First Avenue	Svaluto, A.
"	Grandview Hotel 40 First Avenue	Buchar, Mrs. M.
"	Pearl Lake Hotel 53 First Avenue	Klisanich, F.
"	Recreation Hotel 32 First Avenue	Larche, Nobile
"	Schumacher Hotel 30 First Avenue	Zupancic, J.
"	Tisdale Hotel 54 First Avenue	Pacanic, N.
SEAFORTH	Commercial Hotel Main Street	Dungey, Mrs. F.
"	Dick House Main Street	Dick Bros.
"	Queen's Hotel Goderich & Main Streets	Lewis, H. and Corby, A.
SEARCHMONT	Searchmont Hotel	Sundstrom, P.
SELKIRK	Union Hotel Main & Erie Streets	Cole, H. M.
SHAKESPEARE	Shakespeare Hotel	Henderson, D. J.
"	Union Hotel	McKone, A. R. and Mrs. Isabel
SHANNONVILLE	Wayside Inn	Rierdon, Misses B. and M.
SHEBANDOWAN	McKinnon's Inn	McKinnon, Mrs. M. B.
SIMCOE	Battersby Hotel	Peer, H. E.
"	Governor Simcoe Hotel 413 Norfolk Street, North	Leask, F. A.
"	Melbourne Hotel 39 Robinson Street	Challenger, D. R. and C. E.
"	Norfolk Hotel 41 Norfolk Street	Dumsha, J.
"	Queen's Hotel 110 Robinson Street	Ramey, E. V.
SIOUX LOOKOUT	Clarke's Hotel 62 Front Street	Clarke, Mrs. A.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
SIOUX LOOKOUT	Lakeview Hotel 48 Front Street	Dillabough, J. A.
" "	Moberly Hotel 158 King Street	Moberly, Mrs. E. J.
SMITHS FALLS	Arlington Hotel 21 Beckwith Street	Dillon, J. P. and McNichol, B. O.
" "	Lee Hotel	Lee, G. J.
" "	Rideau Hotel 20 Beckwith Street	Powers, Mrs. A.
	Russell Hotel 2 Beckwith Street	Russell Hotel (Smiths Falls) Limited
SMOOTH ROCK FALLS	Elite Hotel	Pilipchuk, Mrs. E.
" "	Union Hotel	Thiboutot, X.
SOUTHAMPTON	Southampton Hotel	Smith, L. A.
"	Walker House High Street	Mahon, H.
SOUTH PORCUPINE	Airport Hotel Bruce Avenue	Moskal, W.
" "	Central Hotel 84 Bruce Street	Leone, G. and Cimetta, Mrs. M.
" "	Empress Hotel 89 Bruce Street	Cecconi, A., L. and B.
" "	Goldfield's Hotel 136 Golden Avenue	Krasevac, A. and Fera, J.
" "	Gold Range Hotel 85 Golden Avenue	Dagenais, P.
	Queen's Hotel	Percival, T. A.
SOUTH WOODSLEE	Elm Inn Hotel	Ducharme, E.
SPANISH STATION	Huron Hotel	Ferris, Michael, E.
SPENCERVILLE	Spencerville Hotel	Reddick, G. W.
SPRINGFIELD	Glen-Rite Hotel Main Street	Annett, L. G.
STAMFORD	Montrose Hotel R.R. 2	Snell, F. A. and Antonia, J.
"	Queen's Hotel	Lamkin, A. W.
"	Red Casque Inn St. Paul Avenue	Holman, A. A.
"	Uncle Sam's Hotel R.R. 1 Lundy's Lane	Manos, H.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
STEVENSVILLE	Commercial Hotel R.R. 2, Snyder	Willick, Mrs. R. E.
"	Stevensville Hotel	Hawkins, E. J.
STOCO	Ontario House Hotel	Hughes, G. B.
STONECLIFF	Stonecliff Hotel	McKechnie, A.
STONEY CREEK	Da-Nite Hotel	Geekie, Wm.
" "	Jess Hotel R.R. 5, Hamilton	Jess, C. T.
" "	Pines Hotel 145 Lake Avenue	Phoenix, Mr. and Mrs. W. C.
STONEY POINT	Aubin Hotel	LeFaive, A.
" "	Stoney Point Hotel	Bisnaire, J.
STRATFORD	Avon Hotel 388 Downie Street	Kerrigan, S. C.
"	Dominion Hotel 391 Downie Street	Wilton, Raymond
"	Empire Hotel 164 Downie Street	Dyke, A. E.
"	Kent Hotel 209 Waterloo Street	Ruf, E. S.
"	Mansion House 101 Wellington Street	Estate of J. H. Killer
"	Queen's Hotel 161 Ontario Street	Pinkney, D. McG.
"	Windsor Hotel 23 Albert Street	Litt, J. W.
STRATTON	Stratton Hotel	Landry, E.
STURGEON FALLS	Chalfonte Hotel King Street	Boyer, E. D.
" "	King Edward Hotel	Ghiandoni, R. G.
" "	Queen's Hotel Main Street	Dompierre, W. E.
" "	Windsor Hotel	Estate of Mrs. H. Chaput
SUDBURY	Balmoral Hotel 2 Elm Street, East	Balmoral Hotel Co. of Sudbury Limited
"	Coulson Hotel 68 Durham Street	Hotel Coulson Limitted
"	Frontenac Hotel 14 Durham Street, North	Davis, C. and Estate of A. Turpin

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
SUDBURY	Frood Hotel 237 Kathleen Street	Perkovich, N.
"	International Hotel 201 Kathleen Street	Borovich, P.
"	King Edward Hotel 88 Elgin Street	Johnson, C.
"	Montreal Hotel 70 Elm Street, East	Pilon, J. H.
"	National Hotel 477 Notre Dame Street	Kingsley, F.
"	New Ontario Hotel 206 Elgin Street	Ghiandoni, E.
"	New Queen's Hotel 18 Borgia Street	Riddell Estates Limited
"	Nickel City Hotel 252 Hazel Street	Fabbro, E.
"	Nickel Range Hotel 10 Elm Street, West	Nickel Range Hotel (Sudbury) Limited
"	Paris Hotel 24 Borgia Street	Trottier, O. and Mrs. Eva
"	Prospect Hotel 180 Elgin Street	Chyka, J.
"	Sudbury Hotel 300 Elgin Street	Moses, H.
SUNDRIDGE	Bernard Hotel Main Street	Caswell, D. J.
SUTTON	Mansion House	Jamieson, S. J.
"	Sutton Inn High Street	Miller, E.
SWASTIKA	Swastika Hotel	Boisvert, J.
TAMWORTH	Queen's Hotel	Courneya, E. J.
TAVISTOCK	Arlington Hotel	Millington, E.
"	Oxford Hotel Woodstock Street	Liebler, A. E.
TECUMSEH	Golden House 61 Tecumseh Road	Pitre, A. P.
"	Paris Hotel 25 Tecumseh Road	Laramie, L.
"	Renaud's Inn 103 Tecumseh Road	Fraba, C. and Dudley, J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TECUMSEH	Tecumseh House 10 Tecumseh Road	Hebert, W. A.
TEMAGAMI	Goddard's Place Hotel	Goddard, E. F.
"	Ronnoco Hotel	Temagami Outfitting Co. Ltd.
THAMESVILLE	Tecumseh Hotel	Walters, C. E.
THEDFORD	Holwell House Main Street	Powell, G. H.
THESSALON	O'Connor Hotel Main Street	O'Connor, C. H.
"	Sinton Hotel Main Street	Sinton, S. M.
THOROLD	Pine Hotel 141 Pine Street, South	Kociulym, J.
"	Summit House Front Street	Ciuniak, W. and Bruch, M.
"	Thorold Inn 54 Front Street	Kekic, Peter
"	Welland Hotel 46 Front Street	Shanks, M. L.
TILBURY	Empire Hotel Queen Street	Estate of Barnaby Ballard
"	Recess Hotel Queen Street	Beselaere, R. J.
TILLSONBURG	Arlington Hotel Broadway Street	Kohl, C. W.
"	Imperial Hotel 30 Broadway Street	Bringloe, Mrs. A. E.
"	Royal Hotel 11 Broadway Street	Hahn, G. K.
TIMMINS	Albert's Hotel 52 Mountjoy Street, South	Mongeon, J. A.
"	Algoma Hotel 13 Spruce Street, South	Tremblay, J. A.
"	Ambassador Hotel 84 Third Avenue	Boutron, K.
"	Balmoral Hotel 10 Mountjoy Street, North	Horvat, J.
"	Empire Hotel Spruce Street & Fourth Avenue	Empire Hotel Company of Timmins Limited

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TIMMINS	Grand Hotel 56 Third Avenue	Cimetta, Nick and Mrs. Mary
“	G. V. Hotel 94 Sixth Avenue	Varteniuk, G.
“	International Hotel 14 Cedar Street, North	Diemert, G. M.
“	Kingston Hotel 3 Third Avenue	Ursaki, P. and Irimie, V.
“	Lady Laurier Hotel 34 Second Avenue	Lady Laurier Hotel Ltd.
“	Maple Leaf Hotel 8 Balsam Street, South	Kotze, P.
“	Mount Royal Hotel 13 Cedar Street, South	Curik, N. and Moskol, W.
“	Northern Hotel 106 Third Avenue	Vaillancourt, N.
“	Riverview Hotel 4 Mattagami Boulevard, South	Vaillancourt, O. and E.
“	Russell Hotel 2 Wilson Avenue	Hass, Mrs. I.
“	St. Charles Hotel 16 Cedar Street, South	Vaillancourt, N. Lyrette, G. and Robillard, A.
“	Standard Hotel 102 Pine Street, South	Galipeau, Mrs. E. M.
“	Three Star Hotel 13 Maple Street, North	Plut, A.
“	Timmins Hotel 56 Fourth Avenue	Jamsa, Mrs. Alma
“	Welcome Hotel 7 Spruce Street, South	Denisavitch, Mrs. O. and Lavrich, L.
“	Windsor Hotel 6 Cedar Street, South	Windsor Hotel (Timmins) Limited
TODMORDEN	Todmorden Hotel 1067 Broadview Avenue	Hamer, A. and Mrs. M.
TORONTO	Adelaide Hotel 127 Simcoe Street	Sniderman, H. A
“	Alexandra Hotel 102 Queen Street, West	Humeniuk, J.
“	Angelo's Hotel 144 Chestnut Street	Belfanti, A.
“	Avion Hotel 434 Gerrard Street, East	Campbell, W. G. and Garrity, D.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	Avonmore Hotel 276 Jarvis Street	Torno, E.
"	Babloor Hotel 1163 Bay Street	Crooks, G. L.
"	Baltimore Hotel 90 York Street	Perille, J. L.
"	Benlamond Hotel 666 Kingston Road	Harris, Mrs. R., V. and W.
"	Beresford Hotel 250 Queen Street, East	Waxman, A., Glass, M. and A.
"	Beverley Hotel 240 Queen Street, West	Markle, W. W.
"	Biltonia Hotel 147 Dundas Street, East	Bilton, E. E.
"	Bloor Hotel 1313 Bloor Street, West	Sparkes, R. P.
"	Breadalbane Hotel 2-8 Breadalbane Street	Breadalbane Hotel Ltd.
"	Broadview Hotel 106 Broadview Avenue	Dunlop, A. E.
"	Brockton Hotel 1543 Dundas Street, West	Brockton Hotel Limited
"	Brunswick Hotel 481 Bloor Street, West	Davidson, Mrs. K. C.
"	Cameron Hotel 408 Queen Street, West	Goldstein, M.
"	Canada Hotel 134 Sherbourne Street	Wade, L. M.
"	Carls-Rite Hotel 174 Front Street, West	Peninsula Hotel Co. Ltd.
"	Chateau Dufferin 1655 Dufferin Street	Chateau Dufferin Limited
"	Claremont Hotel 734 Queen Street, West	Wade, F. M.
"	Clifton Hotel 298 Queen Street, West	Bobechko, P. and Yasmanicki, J.
"	Clinton Hotel 693 Bloor Street, West	Clinton Hotel Limited
"	Albany Hotel 158 King Street, East	Diakiw, John
"	Columbia Hotel 2 Ossington Avenue	Walker, W. J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	Commerce Hotel 154 Danforth Avenue	Walton, Mrs. F. B. and J. A.
"	Commodore Hotel 2112 Danforth Avenue	Hershoran, H.
"	Coxwell Inn 1544 Danforth Avenue	Beer, F. and Estate of Thomas Hare
"	Derby Hotel 393 King Street, East	Derby Hotel (Toronto) Limited
"	Danforth Hotel 2763 Danforth Avenue	Danforth Hotel Co. Ltd.
"	Dennis Hotel 238 Broadview Avenue	Melnick, James
"	Dominion Hotel 500 Queen Street, East	Shore, R. A.
"	Drake Hotel 1150 Queen Street, West	Lundy, M. and Greenbaum, J.
"	Duke of Connaught Hotel 458 Queen Street, West	Dyba, M.
"	Duke of York Hotel 1225 Queen Street, East	Perkins, F. J.
"	De France Hotel 30 Hayden Street	Hrytzko, M., Zamiszczuk, J. and Korenowsky, W.
"	Edgewater Hotel 10 Roncesvalles Avenue	Onazuk, M., Dimitroff, C. and Harris, A.
"	Edwin Hotel 650 Queen Street, East	Sher, D. and Saltzman, S.
"	Elliott Hotel 63 Shuter Street	Elliott Hotel Limited
"	Embassy Hotel 7 Bellair Street	Embassy Club Limited
"	Eton Hotel 710 Danforth Avenue	Heffering, H.
"	Everene Hotel 467 Jarvis Street	Edmonds, E.
"	Forbes Hotel 72 Shuter Street	Forbes, J. D.
"	Ford Hotel 595 Bay Street	Ford Hotel Co. of Toronto Ltd.
"	Gerrard Hotel 293 Gerrard Street, East	Estate of D. W. Megaffin

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	Gladstone Hotel 1208 Queen Street, West	Gladstone Hotel Limited
"	Good Hotel 572 Bay Street	Good, Mrs. P.
"	Graymar Hotel 31 Jarvis Street	Meagher, E. J.
"	Gregory Hotel 17 Adelaide Street, West	Hotel Gregory Limited
"	Grovenor Hotel 491 Yonge Street	Hemstead, C.
"	Hunt's Savarin Hotel 336 Bay Street	Hunt's Limited
"	Imperial Hotel 54 Dundas Street, East	Newman, J.
"	Isabella Hotel 556 Sherbourne Street	Estate of K. B. Heisey
"	Jarvis Hotel 103 Jarvis Street	Ontrot, Mrs. B.
"	King Edward Hotel 37 King Street, East	King Edward Hotel (Toronto) Limited
"	Lansdowne Hotel 1744 Dundas Street, West	Lansdowne Enterprises Limited
"	LaSalle Hotel 1215 Bloor Street, West	Ryan, F. and Mrs. K.
"	Linsmore Hotel 1298 Danforth Avenue	Bloom, M.
"	Maple Leaf Hotel 955 Gerrard Street, East	Sullivan, E. J.
"	McCarron Hotel 115 Victoria Street	McCarron, J. J.
"	Merchant's Hotel 94 Front Street, East	Harris, Mrs. A.
"	Metropole Hotel 141 King Street, West	Atlas Hotel Co. Ltd.
"	Monarch Hotel 12 Clinton Street	Worters, R.
"	Morrissey Hotel 817 Yonge Street	Morrissey, W. F.
"	Municipal Hotel 67 Queen Street, West	Mintz, I.
"	National Hotel 249 King Street, East	Merrydew, G.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	New Empress Hotel 1 Gould Street	New Empress Hotel Co.
"	New Statler Hotel 112 Queen Street, West	Variety Hotels Limited
"	New Strathcona Hotel 60 York Street	Bazar, W. and Mazurenko, D.
"	New Windsor Hotel 124 Church Street	Mullen, J. G.
"	Noah's Ark Hotel 2781 Danforth Avenue	Convey, E. J. Jr.
"	Orchard Park Hotel 1684 Queen Street, East	General Hotel Co. Ltd.
"	Oxford Hotel 30 King Street, West	Ticonic Corporation Ltd.
"	Palace Hotel 950 King Street, West	Finnigan, Mrs. L. M.
"	Paramount Hotel 309 Spadina Avenue	Starkman, L.
"	Parkdale Hotel 1302 Queen Street, W.	McDonald, J. G., M., H. E., Misses M. E. and K M., and Calver, Mrs. E. F.
"	Park Plaza Hotel 4 Avenue Road	Park Plaza Corporation Limited
"	Parkview Hotel 935 Queen Street, West	Estate of J. F. Burke
"	Piccadilly Hotel 106 King Street, West	Piccadilly Hotel Co. Ltd.
"	Pine Tree Hotel 650½ Queen Street, West	Fineberg, A.
"	Prince George Hotel 91 York Street	Prince George Hotel Co. Ltd.
"	Rex Hotel 3 St. Patrick Street	Hertzman, L.
"	Rideau Hotel 335 Jarvis Street	Bruno, L. D.
"	Riviera Hotel 197 King Street, East	Humeniuk, T. and Szyko, Mrs. M.
"	Rondun Hotel 2238 Dundas Street, West	Dennie, J. M., E. F., L. N., C. A. and Thorndike, J. S. Sr., J. S. Jr. and R.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	Rose Hotel 78 Centre Avenue	Berrin, I.
"	Rosedale Hotel 1145 Yonge Street	Gendron, A. S.
"	Royal Cecil Hotel 202 Jarvis Street	Dufferin Construction Co. Ltd.
"	Royal Oak Hotel 376 Dundas Sttreet, East	Taylor, F. J., C. J., and Sharpe, R. J.
"	Royal York Hotel 100 Front Street, West	Canadian Pacific Railway Company
"	St. Regis Hotel 392 Sherbourne Street	St. Regis Hotel Limited
"	Scholes Hotel 203 Yonge Street	Scholes Ltd. (John L. Scholes)
"	Shamrock Hotel 491 Gerrard Street, East	Best Hotels Limited
"	Sheldon Hotel 81 Victoria Street	Young, H. P.
"	Simcoe Hotel 508 Eastern Avenue	Fox, C. J.
"	Spadina Hotel 460 King Street, West	Spadina Realty Co. Ltd.
"	Stafford Hotel 940 Danforth Avenue	Hotel Stafford Limited
"	Star Hotel 150 Dundas Street, West	Lamb, F. J. and Miss E.
"	Turf Club Hotel 113 Elm Street	Turf Club Hotel Limited
"	Tusco Hotel 235 Jarvis Street	Tusco Hotel Limited
"	Ulster Arms Hotel 1345 Gerrard Street, East	Corcoran, V. W.
"	Union Hotel 71 Queen Street, West	Union Hotel Limited
"	Victoria Hotel 56 Yonge Street	Victoria Hotel (Toronto) Limited
"	Victory Hotel 418 Bay Street	Assaf, W. E. and Mrs. Eva
"	Village Hotel 51 Elm Street	Bay-Elm Plaza Limited
"	Walker House Hotel 121 Front Street, West	Walker House Hotel Co. Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
TORONTO	Walsingham Hotel 321 Jarvis Street	Freeman, A. R.
"	Waverley Hotel 482 Spadina Avenue	Waverley Hotel Limited
"	Wembley Hotel 2301 Danforth Avenue	Firestone, W. and Abroms, L.
"	Westminster Hotel 240 Jarvis Street	Westminster Realty Co. Ltd.
"	Westmorland Hotel 254 Jarvis Street	Westmorland Hotel Ltd.
"	Wheat Sheaf Hotel 667 King Street, West	Hammall, J.
"	Winchester Hotel 537 Parliament Street	Wilson, G. A.
"	Windermere Hotel 232 Jarvis Street	Windermere Hotel (Toronto) Limited
"	Ye Olde Tavern Hotel 358 Bay Street	Ye Olde Tavern Hotel Limited
TRENTON	Gilbert Hotel 50 Dundas Street, West	Kerr, J. A.
"	Quinte Hotel 19 Murphy Street	Orrill, J.
"	Royal Hotel 47 Dundas Street, East	Sage Enterprises Limited
"	New St. James Hotel 101 Murray Street	High, Albert W.
TROUT CREEK	Evers Hotel	Evers, H.
TROUT MILLS	White House Lodge	White, Mrs. D. M.
UPSALA	Upsala Inn	Nickelson, J. W.
VAL GAGNE	National Hotel	Sancartier, Mrs. M.
VANKLEEK HILL	Windsor Hotel	St. Denis, P.
VAN WAGNER'S BEACH	Edgewater Hotel R.R. 5, Hamilton	Chelar, Marko
VERMILION BAY	Bayview Hotel	Brown, R. D.
VERNER	Commercial Hotel	Lachapelle, E.
VIENNA	New Vienna Hotel	Shelson, R.
VIRGINIATOWN	McGarry Hotel Webster Street	Hotel McGarry Limited
WABIGOON	King Edward Hotel Main Street	Stanford, C. R.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WAHNAPITAE	Grand Union Hotel Hill Street	Marotta, F.
WALFORD	Wilson's Resort (New)	Wilson, W. G.
WALKERTON	Central Hotel	Gibson, Mrs. S.
"	Hartley House	Schmalz, C. P.
"	Queen's Hotel Jackson Street	Wood, H.
WALLACEBURG	Kent Hotel 450 Wallace Street	Van Watteghem, C.
"	Tecumseh House 46 Duncan Street	Mahoney, A. J.
"	Wallaceburg Hotel Wallace Street	Hunter, H. C.
WARDSVILLE	Wardsville Inn Main Street	Muir, Thos. A.
WARREN	Globe Hotel	Boucher, H. P.
WASAGA BEACH	Allistonia Hotel	Sandy Beach Hotels Ltd.
" "	Nottawa Inn	Nottawa Inn Limited
WATERDOWN	American Hotel Dundas Street	Condon, F. E. and Stanley, Mrs. R. M.
"	Kirk House Main and Dundas Streets	Kirk, J. L., Mrs. A. I. and Miss M. A.
WATERLOO	City Hotel 76 King Street, South	Henning, O. R.
"	Kent Hotel 59 King Street, North	Snyder, A. C.
"	Waterloo Hotel 4 King Street, North	Chadder, S. J.
WATFORD	Roche House Main Street	Sproule, G. E.
"	Watford Inn	Hobbs, Mrs. S. A.
WAWA	Lakeview Hotel	Lakeview Hotel (Wawa) Limited
WEBBWOOD	Windsor Hotel	Cayen, J. N.
WELLAND	Colonial Hotel 300 King Street	Estate of Mrs. C. Cutaia
"	Commercial Hotel 62 King Street	Sher, D. and Saltzman, S.
"	Dexter Hotel 69 Main Street, East	Cooper, J. W.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WELLAND	Niagara Hotel 258 King Street	Morabito, J.
"	Reeta Hotel 90 Main Street, East	Hotel Reeta Limited
"	Welland Hotel 3 Niagara Street	Kunda, John and Mrs. Stella
WELLAND JUNCTION	Dain City Hotel	Bouk, H. E.
WELLESLEY	Queen's Hotel	Logel, Jos.
"	Royal Hotel Queen and William Sts.	Pirce, Louis
WEST HILL	West Hill Hotel	Machibroda, J.
WESTPORT	Lexena Hotel Bedford Street	Roberts, H. H.
"	Westport Inn	Garrod, F.
WHITBY	Royal Hotel 171 Brock Street, North	Rosseau, Mrs. R. A. and A. L.
"	Spruce Villa Hotel	Purdy, Mrs. M.
"	Whitby Hotel 207 Dundas Street, West	Bandel, Miss M. E. and L. J.
WHITEFISH	Penage Hotel High Street	Falzetta, P.
WHITEFISH FALLS	Whitefish Falls Hotel	White, S. J.
WHITE RIVER	Green Gables Hotel	Bracci, Mrs. L.
WIARTON	Arlington Hotel Berford Street	Taylor, C. L.
"	Pacific Hotel Berford Street	Walker, A. G. and R. A.
WILLIAMSBURG	Locketon Lodge Hotel	Robert, E.
WILNO	Exchange Hotel	Shulist, Mrs. E.
WINDSOR	Ambassador Hotel 93 Sandwich Street, East	McNamara Hotels Ltd.
"	Arcade Hotel 1353 Wyandotte Street, E.	Kozak, J.
"	Arlington Hotel 891 Erie Street	Bilson, John and Mrs. Mary
"	Baby Hotel 1683 College Avenue	Baby, H.
"	Bedell Hotel 1444 Ottawa Street	Kozak, W. J.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WINDSOR	Bellvue Hotel 1271 Sandwich Street, E.	Opacich, S. and Mandich, G.
"	Blue Water Hotel 128 Windsor Avenue	Labadie, E.
"	Border Hotel 428 Wyandotte Street, E.	Tenenbaum, M.
"	Bridge Avenue Hotel 1886 London Street, West	Vida, M.
"	British American Hotel 6-14 Sandwich Street, E.	Doumani, E. M.
"	Chippawa Hotel 3404 Bloomfield Road	Laforet, E. F.
"	Commodore Hotel 25 Chatham Street, East	Commodore Hotel (Windsor) Limited
"	Coronation Hotel 1521 Sandwich Street, W.	Coronation Hotel (Windsor) Limited
"	Detroit Hotel 1211 Drouillard Road	Detroit Hotel Limited
"	Dixie Hotel 1080 Erie Street, East	Schiller, Mrs. E.
"	Dominion Hotel 3140 Sandwich Street, W.	Boyer, W. H.
"	Drake Hotel 193 Glengarry	Uteson, M.
"	Driving Park Hotel 2105 Ouellette Avenue	Driving Park Hotel Co. Ltd.
"	East Windsor Hotel 1214 Drouillard Road	Poitras, Mrs. B.
"	Erie Hotel 1067 Erie Street, East	Dan, Mrs. A.
"	Essex House 317 Sandwich Street, W.	Kovarbacih, P. and Todorovich, G.
"	Europe Hotel 1638 Drouillard Road	Bulat, P.
"	Grand Central Hotel 241 Sandwich Street, East	Graveline, Mrs. E. M.
"	Grand Hotel 553 Erie Street, East	Grand Hotel (Windsor) Limited
"	Highway Hotel 592 Dougall Avenue	Heffernan, H. A.
"	Hollywood Hotel 900 Howard Avenue	Schulde, J. P.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WINDSOR	Horseshoe Hotel 542 Cataraqui Street	Irvine, Mrs. M.
"	Howard Hotel 1534 Howard Avenue	Foley, Mrs. Mary
"	Imperial Hotel 191 Sandwich Street, W.	Lee, K.
"	International Hotel 932 Drouillard Road	Shamess, Mrs. N.
"	Killarney Castle Hotel 592 Victoria Avenue	Draganitz, M.
"	Lido Venice Hotel 3885 Sandwich Street, W.	Trumble, L.
"	Lincoln Hotel 443 Ouellette Avenue	Lincoln Hotel (Windsor) Limited
"	Maple Leaf Hotel 1629 Howard Avenue	Maple Leaf Hotel (Windsor) Limited
"	Marigold Hotel 1011 Drouillard Road	Zimbalatto, Mrs. C.
"	Martin Hotel 1325 Langlois Avenue	Alaica, J. and Marksity, N.
"	Metropole Hotel 917 Walker Road	Metropole Hotel (Windsor) Limited
"	Monarch Hotel 82 Wyandotte Street, W.	May, F. J. and Johnson, M.
"	Munro Hotel 95 Pitt Street, East	Rusnov, L.
"	Norton Palmer Hotel 130 Park Street, West	Norton Palmer Hotel Ltd.
"	Ottawa Hotel 943 Ottawa Street, East	Rossi, J.
"	Palace Hotel 939 Drouillard Road	Moskalyk, Stefan and Mrs. Jean
"	Plaza Arms Hotel 79 Pitt Street, West	Plaza Arms Limited
"	Peros Hotel 1056 Wyandotte Street, E.	Bulat, P.
"	Prince Edward Hotel 380 Ouellette Avenue	Prince Edward Hotel (Windsor) Limited
"	Rex Hotel 116 Drouillard Road	Lysy, M. and Nikon, N.
"	Ritz Hotel 93 Ouellette Avenue	McNamara Hotels Ltd.

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WINDSOR	Royale Hotel 4877 Wyandotte Street, E.	Radonich, M. and Tarailo, D.
"	Royal Oak Hotel 3260 Sandwich Street, W.	Demic, S. and Kovarbasic, D.
"	St. Clair Hotel 66 Wyandotte Street, East	Sukunda, E.
"	Shore Acres Hotel 1981 Sandwich Street, W.	Sutton, H. W.
"	Southwood Hotel 1353 Wellington Street	Bielich, M.
"	Star Hotel 792 Gladstone Avenue	Star Hotel Company Ltd.
"	Talbot Hotel 581 Elm Avenue	May, F. J. and Johnson, M.
"	Temple Hotel 2756 Charles Street	Poitras, N.
"	Victoria Hotel 400 Chilver Road	Estate of F. H. Laforet
"	Walker House 317 McDougall Street	Estate of J. A. Smith
"	Wellington Hotel 1159 Elliott Street, West	Pelech, H.
"	West Side Hotel 623 Sandwich Street, W.	Larose, A.
"	Westwood Hotel 4280 Sandwich Street, W.	Reaume, E. E.
"	Windsor Hotel 156 Windsor Avenue	Jean, L.
"	Woodbine Hotel 139 Goyeau Street	Stefuriac, Mrs. E. M.
"	Wyandotte Hotel 892 Wyandotte Street, E.	Yarmoluk, J.
WINONA	Inns of Innsville	Kyriakopulos, G.
WOLFE ISLAND	Island Hotel	Johnson, M. V.
WOODSLEE	Rochester Hotel	Grymonprez, C.
WOODBRIDGE	Elm's Hotel Pine Street	Briggs, W. B. Jr.
WOODSTOCK	New Commercial Hotel 15 Graham Street	New Commercial Hotel Co. (Mrs. R. McIntosh; Misses B. I. and D. S. Jupp)

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
WOODSTOCK	Oxford Hotel 28 Finkle Street	Reid, R. H.
"	Royal Hotel	Royal Hotel of Woodstock Limited
"	Southside Hotel 95 Victoria Street	Southside Hotel Company (Woodstock) Limited
YORK MILLS	New Jolly Miller Hotel 3885 Yonge Street	New Jolly Miller Hotel Limited
YORK TOWNSHIP	Oakwood Hotel 489 Oakwood Avenue	Oakwood Hotel Limited
" "	Queensbury Inn 530 Scarlett Road	Corcoran, J. J. and Webster, H.
YOUNG'S POINT	South Beach Hotel	Lawlor, T. J. and L. K.
ZURICH	Dominion Hotel	Johnston, R. H.

CLUBS (SOCIAL)

MUNICIPALITY	NAME OF CLUB	ADDRESS
AMHERSTBURG	Deer Head Club	201 Dalhousie Street
BARTONVILLE	Glendale Golf & Country Club Limited	R.R. 1
BELLEVILLE	Belleville Club Limited	210 Pinnacle Street
BILLINGS BRIDGE	Ottawa Hunt & Golf Club Limited	R.R. 2
BRANTFORD	Brantford Club	98 George Street
"	Polish Alliance Friendly Society, Branch No. 10	126 Albion Street
"	Polish Mutual Benefit & Friendly Society	154 Pearl Street
"	Shriners Club of Brantford Limited	144 Dalhousie Street
BRIDGEPORT	Grand River Golf & Country Club	
BROCKVILLE	Brockville Club	22 Court House Avenue
CHATHAM	Chatham Golf & Country Club	Queen Street
"	Kent Club Corporation	155 King Street, West
COBOURG	Cobourg Golf Club Limited	919 Division Street
ERINDALE	Credit Valley Golf Club	
ETOBICOKE	Royal York Hotel Golf Club Limited	Royal York Road
FORT ERIE	Niagara Racing Association of Ontario	
FORT ERIE NORTH	Erie Downs Golf & Country Club Limited	
FORT WILLIAM	Benevolent & Protective Order Elks Ft. William Lodge No. 82	201 North Syndicate Avenue
" "	Fort William Country Club Limited	
" "	Italian Club, Principe di Piemonte Society	600 McLaughlin Street
" "	Fort William Club (New)	116 McVicar Street
GERALDTON	Kenogamisis Golf Club	
GUELPH	Guelph Country Club Limited	Wellington Place
"	Guelph Golf & Recreation Club Limited	

MUNICIPALITY	NAME OF CLUB	ADDRESS
HAMILTON	Chedoke Golf Club	Aberdeen Avenue
"	Commercial Club Limited	4 Vine Street
"	Hamilton Club	6 Main Street, East
"	Hamilton Thistle Club Ltd.	81 Robinson Street
"	Hamilton Victoria Club Ltd.	568 King Street, East
"	Leander Boat Club	Foot of John Street
"	Royal Canadian Yacht Club	McNab Street, North
HANOVER	Saugeen Golf Club	Brant Township
HUMBER BAY	Humber Valley Golf & Tennis Club	29 Dilon Avenue
ISLINGTON	Islington Golf Club Limited	
KENORA	Kenora Golf & Country Club Limited	319 Second Street, S.
KINGSTON	Kingston & Frontenac County Conservative Club	15 Montreal Street
"	Kingston Curling Club	75 Clergy Street, West
KIRKLAND LAKE	National Polish Society (New)	8 Wood Street
KITCHENER	Granite Club	67 Agnes Street
"	Rockway Golf & Bowling Club	Rockway Drive
"	Westmount Golf & Country Club Limited	
LAMBTON MILLS	Lambton Golf & Country Club Limited	Scarlett Road
LEASIDE	Thorncliffe Park Racing & Breeding Association Ltd.	Woodbine Park
LONDON	Hermitage Club	368 Richmond Street
"	London Club Limited	177 Queen's Avenue
"	Marconi Club	74 Carling Street
"	Mocha Mosque	471 Waterloo Street
"	Polish National Association Limited	554 Hill Street
LONG BRANCH	Toronto Golf Club	
NIAGARA FALLS	Niagara Falls Badminton & Tennis Club	1300 Wilmott Street
NIAGARA-ON-THE-LAKE	Niagara-on-the-Lake Golf Club	Front Street
NORTH BAY	Bay Club	99 Main Street, West

MUNICIPALITY	NAME OF CLUB	ADDRESS
NORTH BAY	North Bay Golf & Country Club Limited	
OAKVILLE	Oakville Club Limited	Water Street
OSHAWA	Oshawa Golf Club Limited	Alexandra Street
OTTAWA	Association Athletique Montagnard	693½ Somerset Street, West
"	Bridge Club of Ottawa Ltd.	184 Sparks Street
"	Laurentian Club Incorporated	233 Metcalfe Street
"	L'Institut Canadian Francais D'Ottawa	123 Rideau Street
"	Rideau Club	84 Wellington Street
OVERBROOK	Rideau Lawn Tennis Club Limited	
PAQUETTE STATION	Dominion Golf & Country Club	
PEMBROKE	Pembroke Golf Club Limited	
PETERBOROUGH	Peterborough Club	126 Simcoe Street
PORT ARTHUR	Port Arthur Curling Club	214 Egan Street
" "	Port Arthur Golf & Country Club Limited	Eleventh Avenue
" "	Shuniah Club	8th Floor, Public Utilities Building
" "	Italian Mutual Benefit Society (New)	130 Algoma Street
PORT CREDIT	Lakeview Golf Club Limited	Dixie Road
" "	Mississauga Golf & Country Club Limited	Mississauga Road
RENFREW	Renfrew Golf Club Limited	R. R. 3
RIDGEWAY	Buffalo Canoe Club	Erie Road
"	Cherry Hill Club Limited	Cherry Hill and Garrison Road
RIVERSIDE	Riverside Yacht Club Limited	5228 Riverside Drive
"	Windsor Yacht Club	4400 Riverside Drive
ST. CATHARINES	St. Catharines Club	77 Ontario Street
" "	St. Catharines Golf Club Limited	34 Westchester Avenue
ST. CLAIR BEACH	Beach Grove Golf Club	R.R. 1, Tecumseh
" " "	Lakewood Golf Club Limited	R.R. 1, Tecumseh

MUNICIPALITY	NAME OF CLUB	ADDRESS
ST. THOMAS	Hi-Ro Shriners' Club of Elgin	472 Talbot Street
SANDWICH EAST	Little River Golf & Country Club	Lauzon Road, R.R. 2 Tecumseh
SANDWICH WEST	Essex County Golf & Country Club Limited	
SAULT STE. MARIE	Algo Men's Club	639 Bay Street
"	Marconi Social Club	450 Albert Street, East
"	Sault Ste. Marie Golf Club	Queen Street, East
"	Sons of Italy Grand Lodge of Ontario	Cathcart and Hudson Streets
"	Troubadour Club	120 Gore Street
SCARBORO	Cedar Brae Golf & Country Club	Markham Road
"	Scarboro Golf & Country Club Limited	
"	Toronto Hunt Club	1355 Kingston Road
SCARBORO BLUFFS	Cliffside Golf Club	
SIMCOE	Norfolk Golf & Country Club Limited	Peel Street
SOUTH WINDSOR	Roseland Golf & Country Club	Dougall Avenue
STRATFORD	Stratford Country Club Ltd.	Romeo Street
SUDBURY	Idylwylde Golf & Country Club Limited	
"	Sudbury Golf Club Limited	McKim Township
"	Sudbury Riding Club (New)	703 Old Garson Road
TECUMSEH	Shawnee Gun & Country Club	Shawnee Road
TORONTO	Acadian Recreation Club Limited	1797 Danforth Avenue
"	Albany Club of Toronto Ltd.	91 King Street, East
"	Arlington Athletic Club	767 Dovercourt Road
"	Arts & Letters Club	14 Elm Street
"	Badminton & Racquet Club of Toronto	25 St. Clair Avenue, W.
"	Boulevard Club Limited	175 Lakeshore Blvd.
"	Canadian Military Institute	426 University Avenue

MUNICIPALITY	NAME OF CLUB	ADDRESS
TORONTO	Carlton Club of Toronto Ltd.	94 Hayden Street
"	Elm Grove Recreation & Athletic Club	1249 Queen Street, W.
"	Engineers' Club of Toronto	350 Bay Street
"	Granite Club Limited	63 St. Clair Avenue, W.
"	Law Society of Upper Canada	120 Queen Street, West
"	National Club	303 Bay Street
"	Ontario Club	16 Wellington St., W.
"	Primrose Club Limited	41 Willcocks Street
"	Royal Canadian Yacht Club	Centre Island
"	St. Andrew's Bridge & Social Club	300½ College Street
"	Toronto Club	107 Wellington St., W.
"	Toronto Ladies Club	2 Bloor Street, West
"	Toronto Lawn Tennis Club	40 Rowanwood Avenue
"	Toronto Men's Press Club	143 Yonge Street
"	Toronto Skating Club	568 Dupont Street
"	University Club of Toronto	380 University Avenue
"	Victoria Skating & Curling Association of Toronto Limited	277 Huron Street
"	York Club	135 St. George Street
WALKERTON	Walkerton Golf & Country Club Limited	
WATERLOO	Waterloo Club Limited	34 Erb Street, East
WELLAND	Temple Club	268 Main Street, East
"	Welland Club Limited	King Street
WESTON	Elm's Golf & Country Club	Woodbridge Road
"	Oakdale Golf & Country Club Limited	Jane Street
"	Pine Point Golf Club	200 Gorden Avenue
"	Summerlea Golf & Country Club	R.R. 3
"	Weston Golf & Country Club Limited	
WINDSOR	Border Cities Polish Canadian Club	1530 Langlois Avenue

MUNICIPALITY	NAME OF CLUB	ADDRESS
WINDSOR	French Canadian Club of Windsor	1253 Wyandotte St., E.
"	Frontier Badminton Club (Inc.)	4037 Riverside Drive
"	Frontier Social Club	454 McDougall Avenue
"	Othmar Grotto Club	1730 Wyandotte St., E.
"	Polish People's Home Association	1275 Langlois Avenue
"	Windsor & District Hungarian Society	812 Ottawa Street
"	Chrymoto Men's Club (New)	2330 McDougall Street
"	Border Cities Italian Club (New)	966 Wyandotte St., E.
YORK EAST	Woodbine Golf & Country Club	O'Connor Drive and Woodbine Avenue
YORK MILLS	St. Andrew's Estates & Golf Club Limited	R.R. 2
" "	York Downs Golf & Country Club Limited	R.R. 1
YORK NORTH	Rosedale Golf Club	1901 Mount Pleasant Road
" "	Toronto Cricket Club	Wilson Avenue, Armour Heights

CLUBS (VETERAN AND LABOUR)

MUNICIPALITY	NAME OF CLUB	ADDRESS
ATIKOKAN	Canadian Legion B.E.S.L. Branch No. 145 (New)	
AYLMER	Canadian Legion B.E.S.L. Branch No. 81 (New)	
BELLEVILLE	Army & Navy Veterans in Canada, Unit No. 201	187 Front Street
BRANTFORD	Brantford Ex-Imperial Veterans' Social Club	115 Market Street
"	Canadian Legion B.E.S.L. Branch No. 90	20 Colborne Street
CALEDONIA	Canadian Legion B.E.S.L. Branch No. 154	
CHATHAM	Canadian Legion B.E.S.L. Branch No. 28	29 Victoria Avenue
DUNNVILLE	Canadian Legion B.E.S.L. Branch No. 142	305 Queen Street, East
ELORA	Canadian Legion B.E.S.L. Branch No. 229	Metcalfe Street
ESSEX	Canadian Legion B.E.S.L. Branch No. 201	Talbot Street
FAIRBANK	Canadian Legion B.E.S.L. Branch No. 75	31 Shortt Street
"	His Majesty's Imperial Army and Navy Veterans' Association	2089 Dufferin Street
FORT ERIE	Canadian Legion B.E.S.L. Branch No. 71	31 Bertie Street
FORT FRANCES	Canadian Legion B.E.S.L. Branch No. 29	259 Scott Street
FORT WILLIAM	Army & Navy Veterans in Canada, Unit No. 257	141 Simpson Street
" "	Canadian Legion B.E.S.L. Slovak Branch No. 129	800 McIntosh Street
" "	Canadian Legion B.E.S.L. Fort William Branch	226 South May Street
" "	Canadian Legion B.E.S.L. Italian Branch No. 113	534 McLaughlin Street
GALT	Canadian Legion B.E.S.L. Branch No. 121	15 Walnut Street
GEORGETOWN	Canadian Legion B.E.S.L. Branch No. 120	Mill Street

MUNICIPALITY	NAME OF CLUB	ADDRESS
GRAVENHURST	Canadian Legion B.E.S.L. Branch No. 302	Bay Street
GUELPH	Canadian Legion B.E.S.L. Branch No. 234	Priory Square
"	Red Chevron Club (Branch No. 4 Originals' Club)	116 Quebec Street, East
HAMILTON	Army & Navy Veterans in Canada, Unit No. 153	119 James Street, North
"	British Imperial Club	80½ James Street, N.
"	Canadian Legion B.E.S.L. Branch No. 7	36 Charles Street
"	Canadian Legion B.E.S.L. Branch No. 58	Barton and Agnes Sts.
"	Canadian Pensioners' Association of the Great War (Hamilton Branch)	199 King William St.
"	Canadian Legion B.E.S.L. Branch No. 315 (New)	644 Barton Street, East
"	Dominion Foundries & Steel Overseas Veterans' Association	1052 Barton Street, E.
"	Firestone War Veterans' Association	1211 Cannon Street, E.
"	Fourth Canadian Infantry Battalion Veterans' Association (Hamilton Branch)	12½ King Street, West
"	His Majesty's Army & Navy Veterans' Society	96 McNab Street, North
"	Old Contemptibles' Association & Social Club of Hamilton	1002 Barton Street, E.
"	Veterans of First Canadian Contingent Social Club of Hamilton	235½ King Street, East
"	Veterans' Service League	1473 Main Street, East
"	War Amputations of Canada Hamilton Branch	345½ Barton Street, E.
HESPELER	Canadian Legion B.E.S.L. Branch No. 272	Queen Street, West
ISLINGTON	Canadian Legion B.E.S.L. Branch No. 210	Bloor Street, West

MUNICIPALITY	NAME OF CLUB	ADDRESS
KENORA	Canadian Legion B.E.S.L. Branch No. 12	334 Second Street, S.
KINGSTON	Canadian Corps Association Branch No. 120	164 Wellington Street
"	Canadian Legion B.E.S.L. Branch No. 9	67 Princess Street
KINGSVILLE	Canadian Legion B.E.S.L. Branch No. 188	Main Street, West
KIRKLAND LAKE	Canadian Legion B.E.S.L. Branch No. 87	79 Government Rd., W.
KITCHENER	Army & Navy Veterans in Canada, Unit No. 247	33 King Street, East
"	Canadian Legion B.E.S.L. Branch No. 50	48 Ontario Street, N.
LEAMINGTON	Canadian Legion B.E.S.L. Branch No. 84	Memorial Park
LINDSAY	Canadian Legion B.E.S.L. Branch No. 67	12 York Street
LONDON	Army & Navy Veterans in Canada, Imperial Unit No. 229	340 York Street
"	Canadian Legion B.E.S.L. Branch No. 263	70 Dundas Street
"	Canadian Legion B.E.S.L. Branch No. 2	125½ King Street
"	Canadian Legion B.E.S.L. Branch No. 279	556 Dundas Street
"	Canadian Legion B.E.S.L. Roosevelt Branch No. 306	119½ Dundas Street
"	Originals' Club, Inc. of Ontario, Branch No. 2	104 Dundas Street
MARMORA	Canadian Legion B.E.S.L. Branch No. 237 (New)	
MERRITTON	Canadian Legion B.E.S.L. Branch No. 138	10 Chestnut Street
MIMICO	Canadian Legion B.E.S.L. Branch 217	14 Drummond Avenue
MOUNT DENNIS	Canadian Legion B.E.S.L. Branch No. 31	1006 Weston Road
NEWTONBROOK	North York Township Veterans' Association	Yonge Street and Abitibi Avenue

MUNICIPALITY	NAME OF CLUB	ADDRESS
NEW TORONTO	Canadian Legion B.E.S.L. Branch No. 3	263 Seventh Street
NIAGARA FALLS	Canadian Corps Association, Unit No. 104	1657 Victoria Avenue
" "	Canadian Legion B.E.S.L. Branch No. 51	1347 Victoria Avenue
NIAGARA-ON-THE-LAKE	Canadian Legion B.E.S.L. Branch No. 124	King Street
OAKVILLE	Canadian Legion B.E.S.L. Branch No. 114	Church and Navy Sts.
OSHAWA	Canadian Legion B.E.S.L. Branch No. 43	90 Centre Street
PARIS	Canadian Legion B.E.S.L. Branch No. 29	70 William Street
PARRY SOUND	Canadian Legion B.E.S.L. Branch No. 117	James Street
PENETANG	Canadian Legion B.E.S.L. Branch No. 68 (New)	
PETERBOROUGH	Canadian Legion B.E.S.L. Branch No. 52	217 Murray Street
POINT EDWARD	Point Edward Ex-Service Men's Club	417 Michigan Avenue
PORT ARTHUR	Canadian Legion B.E.S.L. Port Arthur Branch No. 5	224 Cooke Street
PORT COLBORNE	Canadian Corps Association Branch No. 43	49 Kent Street
PORT CREDIT	Canadian Legion B.E.S.L. Branch No. 82	
PRESTON	Canadian Legion B.E.S.L. Branch No. 126	506 King Street
RAINY RIVER	Canadian Legion B.E.S.L. Branch No. 54	Third Street
REDDITT	Canadian Legion B.E.S.L. Branch No. 82	Box 17
RIVERSIDE	Canadian Legion B.E.S.L. Branch No. 255	1111 Wyandotte Street
ST. CATHARINES	Canadian Legion B.E.S.L. Branch No. 24	111 Church Street
" "	Earl French Social Club (Imperial Veterans' Corps)	15 George Street
ST. THOMAS	Canadian Legion B.E.S.L. Branch No. 41	24 John Street

MUNICIPALITY	NAME OF CLUB	ADDRESS
SARNIA	Sarnia Service Club Incorporated	286 Front Street, North
SAULT STE. MARIE	Algoma Steel Workers' Club	126 Thompson Street
"	Canadian Legion B.E.S.L. Branch No. 25	343 Queen Street, East
SCARBORO	Canadian Legion B.E.S.L. Branch No. 13	1577 Kingston Road
"	Canadian Legion B.E.S.L. Branch No. 73	2 Robinson Avenue
SIMCOE	Army & Navy Veterans in Canada, Unit No. 255	82 Culver Street
SIOUX LOOKOUT	Canadian Legion B.E.S.L. Branch No. 78 (New)	
STRATFORD	Canadian Legion B.E.S.L. Branch No. 8	207 St. Patrick Street
SUDBURY	Canadian Legion B.E.S.L. Branch No. 76	49 Elm Street, East
TECUMSEH	Canadian Legion B.E.S.L. Branch No. 261 (New)	213 Lesperance Rd., S.
THOROLD	Canadian Legion B.E.S.L. Branch No. 17	3 Ormond Street, South
TILBURY	Canadian Legion B.E.S.L. Branch No. 206	Queen Street
TIMMINS	Canadian Legion B.E.S.L. Branch No. 88	17 Cedar Street, South
TODMORDEN	Canadian Legion B.E.S.L. Branch No. 10	1083 Pape Avenue (M.A. Toronto 6)
TORONTO	Canadian Corps of Commissionaires	78 Church Street
"	Canadian Legion B.E.S.L. Branch No. 1	1403 Gerrard Street, E.
"	Canadian Legion B.E.S.L. Branch No. 42	303 Kingston Road
"	Canadian Legion B.E.S.L. Branch No. 11	103 Coleman Avenue
"	Canadian Legion B.E.S.L. Branch No. 65	6-A Greenlaw Avenue
"	Earl French Memorial Club (Operated by the Citizens' Repatriation League, Inc.)	453 Broadview Avenue

MUNICIPALITY	NAME OF CLUB	ADDRESS
TORONTO	Fifteenth Battalion Old Comrades' Social Club	97 Yonge Street
"	Fourth Battalion Club (Toronto Branch)	14 Queen Street, East
"	International Geneva Association	90 Wellington Street, West
"	Originals' Club Incorporated (Overseas 1914)	Room "F", Yonge Street Arcade
"	Royal Naval (Association) Club	290½ Yonge Street
"	Sappers' Club of Toronto	40 Murray Street
"	Scottish Club	46 King Street, East
"	Sir Arthur Currie Memorial Club (Operated by Citizens' Repatriation League Inc.)	41 Isabella Street
"	Third Battalion Toronto Regiment Club	285 Bloor Street, East
"	Toronto Black Watch (Inc.)	56 Wellington Street, East
"	Toronto Disabled War Veterans' Social Club	265 Gerrard Street, E.
"	Toronto Labour Lyceum Association, Limited	346 Spadina Avenue
"	Twentieth Battalion Club	256 Huron Street
"	War Amputations of Canada (Toronto Branch)	62 St. Alban's Street
"	West End Veterans' Club (Operated by the Citizens' Repatriation League Inc.)	722 College Street
WALLACEBURG	Canadian Legion B.E.S.L. Branch No. 18	Margaret Avenue
WELLAND	Canadian Legion B.E.S.L. Branch No. 4	275 Main Street, East
WESTMOUNT	Westmount Army & Navy Club	Kingdon Street
WHITBY	Canadian Legion B.E.S.L. Branch No. 112 (New)	
WINDSOR	Army & Navy Veterans in Canada, Unit No. 30	1014 Tecumseh Road
"	Canadian Legion B.E.S.L. Branch No. 143	1880 Wyandotte Street, West

MUNICIPALITY	NAME OF CLUB	ADDRESS
WINDSOR	Canadian Legion B.E.S.L. Branch No. 94	36 Chatham Street, E.
"	Canadian Legion B.E.S.L. Branch No. 12	2090 Brant Street
"	Canadian Legion B.E.S.L. Branch No. 222 (Edith Cavell)	83 Sandwich Street, W.
"	Canadian Pensioners' Association (Windsor Branch)	493 London Street, W.
"	Polish Army Veterans' Association, Post No. 126	1052 Langlois Avenue
WOODSTOCK	Canadian Legion B.E.S.L. Branch No. 55	360 Dundas Street
YORK EAST	Canadian Legion B.E.S.L. Branch No. 22	63 Barker Avenue
YORK TOWNSHIP	Canadian Legion B.E.S.L. Branch No. 57	351 Silverthorne Ave.
	Canadian Legion B.E.S.L. Branch No. 266	3593 Dundas Street, W. (M.A. Toronto 9)

MILITARY MESSES

MUNICIPALITY	NAME OF UNIT
ANGLER	Veterans' Guard of Canada, Internment Camp
ANGUS	R.C.A.F., No. 13 "X" Depot
AYLMER	R.C.A.F., Flight Engineers' School
BARRIE	Grey & Simcoe Foresters, Second (R) Battalion Armouries
BARRIEFIELD	A-21 C.O. & E.M.E. Training Centre
"	A-36 Canadian Radar Training Centre
"	Royal Canadian Signals, A-7 Canadian Signal Training Centre
"	Vimy Barracks, Military P.O. 312
"	C.W.A.C. No. 7 Administrative Unit
BELLEVILLE	Argyll Light Infantry (Tank) First (R) Battalion Bridge Street East
BRANTFORD	Dufferin & Haldimand Rifles of Canada, C.A., Second (Reserve) Battalion Brant Avenue
"	R.C.A.F., No. 4 Reserve Equipment Maintenance Unit
"	No. 20 Canadian Infantry (Basic) Training Centtre Colborne Street East
"	Second-Tenth (R) Dragoons, C.A. & Fifty-fourth (R) Field Battery, Royal Canadian Artillery 37 Dalhousie Street
BROCKVILLE	Brockville Rifles, Second (R) Battalion East Avenue
"	Officers' Training Centre (E.C.) (C.A.A.)
"	Canadian Second Echelon (Pacific Force)
"	Royal Canadian Regiment, 2nd Battalion
CAMP BORDEN	A-22 Canadian Army Medical Corps Training Centre
" "	A-32 Canadian Provost Corps Training Centre
" "	Camp Borden Military Hospital
" "	Camp Headquarters
" "	Canadian Dental Corps (C.A.), No. 29 Company
" "	No. 1 Canadian Armoured Corps Training Regiment
" "	No. 2 Canadian Armoured Corps Training Regiment
" "	No. 3 Canadian Armoured Corps Training Regiment
" "	No. 15 Company, R.C.E.M.E. No. 15 Ordnance Depot

MUNICIPALITY	NAME OF UNIT
CAMP BORDEN	No. 15 E.S. & W. Company, Royal Canadian Engineers
" "	No. 44 Administrative Unit, C.W.A.C.
" "	R.C.A.F., No. 1 Service Flying Training School
" "	Royal Canadian Army Service Corps, No. 15 District Company
" "	Royal Canadian Army Service Corps Training Centre A-19
" "	Technical & School Wing, A-33 C.A.C.T.E.
" "	No. 86 Military Detention Barracks
" "	21st Armoured Car Regiment Royal Canadian Dragoons
" "	Lord Strathcona's Horse (Royal Canadian) 2nd Canadian Armoured Regiment
CHATHAM	Kent Regiment, Second (R) Battalion 28 William Street North
COBOURG	Royal Canadian Artillery, 14/22nd (R) Field Battery King Street West
CORNWALL	Stormont, Dundas & Glengarry Highlanders, Second (R) Battalion Fourth Street East
CRUMLIN	London Military Hospital
DESERONTO	R.C.A.F., No. 1 Instrument Flying School
DUNDAS	102nd (Res.) Wentworth A.A. Battery, Royal Canadian Artillery King Street
ELORA	Royal Canadian Army Medical Corps, 2/11th Field Ambulance (Res.) The Armoury
FINGAL	R.C.A.F., No. 9 S.E.H.U.
FORT ERIE	Lincoln & Welland Regiment, "C" Company Second (R) Battalion Main Street
FORT WILLIAM	Fort William Armouries' Men's Canteen (Reserve) 223 North Archibald Street
GALT	Highland Light Infantry of Canada, Second (R) Battalion Mill Street
GANANOQUE	R.C.A.F., No. 14 Service Flying Training School, No. 1 Relief Landing Ground
GRAVENHURST	Internment Camp No. 20, Veterans' Guard of Canada

MUNICIPALITY	NAME OF UNIT
GODERICH	Middlesex & Huron Regiment, "C" Company Newgate Street
GUELPH	Guelph Garrison Messes Huskisson Street
HAGERSVILLE	R.C.A.F., No. 16 Service Flying Training School
“	R.C.O.C. Central Mechanization Depot
HAMILTON	Argyll & Sutherland Highlanders of Canada (Princess Louise's), Canadian Army, Second (R) Battalion 200 James Street North
“	Eighth (R) Field Regiment and 13th Reserve (Hamilton) A.A. Battery, R.C.A. James Street North
“	H.M.C.S. "Star" Catherine Street North
“	Royal Canadian Army Medical Corps, C.A., No. 5 (Reserve) Field Ambulance 200 James Street North
“	Royal Canadian Army Service Corps, Second (R) Divisional Ammunition Company (C.A.) 200 James Street North
“	Royal Canadian Corps Signals, C.A., No. 3 Company "A" (Reserve) Corps 200 James Street North
“	Royal Canadian Engineers, First (Reserve) Field Squadron James Street North
“	Royal Hamilton Light Infantry (W.R.), C.A., Second (R) Battalion 200 James Street North
“	Second-Tenth (Reserve) Dragoons, C.A., "B" and "H.Q." Squadrons 200 James Street North
“	S-8 Canadian Army Trades School Kenilworth Avenue North
HEARST	No. 1 P/W Detention Barracks, Veterans' Guard of Canada
IPPERWASH	A-29 Canadian Infantry Training Centre
JARVIS	R.C.A.F., No. 404 R.E.M.S.
KAPUSKASING	124th Ferry Squadron Detachment Kapuskasing Airport
KENORA	Royal Canadian Artillery, 16/17 (R) Medium Battery 316 First Street North
KINGSTON	Royal Military College

MUNICIPALITY	NAME OF UNIT
KINGSTON	Canadian Women's Army Corps, No. 103 Depot Company Ellerbeck and Union Streets
"	Combined Messes The Armouries, Montreal Street
"	Headquarters Officers' Mess, M.D. No. 3 King Street West
"	H.M.C.S. "Cataraqui" 47 Wellington Street
"	No. 3-A District Depot Fort Frontenac
"	Princess of Wales Own Regiment (M.G.), (R) Montreal Street
"	R.C.A.F., No. 14 Service Flying Training School
"	Royal Canadian Army Service Corps, No. 3 District Company Artillery Park
"	Royal Canadian Ordnance Corps, No. 3 Ordnance Depot Ontario and Princess Streets
"	No. 89 Military Detention Barracks
KITCHENER	Canadian Women's Army Corps Training Centre
"	Royal Canadian Army Medical Corps, 24th Reserve Field Ambulance 87 King Street, East
"	Scots Fusiliers of Canada (R) 251 King Street, West
LINDSAY	45th-56th (R) Field Batteries, Royal Canadian Artillery (Garrison Mess) 160 Kent Street, West
LISTOWEL	Royal Canadian Artillery, 100th (R) Field Battery Main Street
LONDON	Canadian Provost Corps, C.A., No. 30 Provost Coy. Carling Heights
"	Headquarters, M.D. No. 1 Officers' Mess Talbot Street Armouries
"	H.M.C.S. "Prevost" 433 Richmond Street
"	London Garrison Dundas Street Armouries
"	Middlesex & Huron Regiment, First Battalion 347 Oxford Street

MUNICIPALITY	NAME OF UNIT
LONDON	No. 1 District Depot, (C.A.) Wolseley Barracks
"	Talbot Street Armouries Garrison Mess Talbot Street
"	Queen's Park Barracks, Headquarters, M.D. No. 1 Queen's Park (Fair Grounds), Dundas Street
LONG BRANCH	S-3 Canadian Small Arms School (Eastern Canada) C.A. Lakeshore Road
" "	No. 2 Infantry Training Battalion
MADOC	Hastings & Prince Edward Regiment, Second (R) Battalion, "B" Company
MEAFORD	A. F. V. Range
MERRICKVILLE	Brockville Rifles, Second (R) Battalion
MILFORD BAY	R.C.A.F., No. 1 Convalescent Hospital
MONTEITH	Monteith Internment Camp, Veterans' Guard of Canada
MOUNTAIN VIEW	R.C.A.F. Station
MOUNT HOPE	R.C.A.F., No. 1 Wireless School
NAPANEE	Royal Canadian Artillery, 47th (R) Field Battery Centre Street
NEWMARKET	No. 23 C.I. (B) T.C. Sprigley Street
NEW SARUM	Central Mechanization Depot, Sub-depot R.C.O.C., (C.A.)
NEW TORONTO	Internment Camp, Veterans Guard of Canada
NEYS	Internment Camp No. 100
NIAGARA FALLS	Lincoln & Welland Regiment, Second (R) Battalion, "D" Company 1049 Victoria Avenue
NIAGARA-ON-THE LAKE	Headquarters, No. 32 (R) Brigade Group Summer Camp
" " "	Niagara Military Camp Headquarters
" " "	Veterans' Guard of Canada, No. 35 Company Kent Regiment C.A. (Active)
" " "	Algonquin Regiment, C.A., Second (R) Battalion and 22nd (R) Company, Veterans' Guard of Canada 115 Oak Street, West
" " "	No. 32 Company, Canadian Provost Corps 108 First Avene West
" " "	A-38 Prisoner War Guard Training Centre Fort Chippawa Barracks

MUNICIPALITY	NAME OF UNIT
OAKVILLE	R.C.A.M.C. No. 2 Women's Services' Health Centre
ORILLIA	No. 26 Canadian Infantry (Basic Training Centre) Champlain Barracks
OSHAWA	Eleventh (R) Army Tank Regiment 53 Simcoe Street North
OTTAWA	Air Force Headquarters, Officers' Mess 158 Gloucester Street
"	Air Force Headquarters, W.D. Officers' Mess Princess Alice Barracks, 152 Argyle Street
"	Cameron Highlanders of Ottawa, Second (R) Bn. Drill Hall, Cartier Square
"	C.O.T.C., University of Ottàwa Contingent 173 Waller Street
"	Chemical Warfare Laboratories Sussex and John Streets
"	Combined Medical-Ordnance Mess 63 Sussex Street
"	Fourth (R) Reconnaisance Regiment (4 P.L.D.G.), C.A.C. 557 Rideau Street
"	Governor General's Foot Guards, Second (R) Bn. Drill Hall, Cartier Square
"	H.M.C.S. "Bytown" 78 Lisgar Street
"	H.M.C.S. "Carleton" Dow's Lake
"	No. 3 District Depot, C.A. Lansowne Park Military Camp
"	No. 7 (R) Infantry Brigade Workshop, R.C.E.M.E. 609 Bronson Avenue
"	No. 12 Administrative Unit, C.W.A.C. 312 Laurier Avenue, East
"	No. 40 Administrative Unit C.W.A.C. Glebe Barracks, 268 First Avenue
"	R.C.A.F., Air Officer Commanding Maintenance Command Uplands
"	R.C.A.F., No. 17 Equipment Depot Victoria Island
"	Royal Canadian Army Medical Corps, N.D.H.Q. Coy. 180 Elgin Street

MUNICIPALITY	NAME OF UNIT
OTTAWA	Royal Canadian Army Medical Corps, No. 23 (R) Field Ambulance 464 Bank Street
"	Royal Canadan Army Service Corps, First (R) Corps Troops 278 Sparks Street
"	Royal Canadian Army Service Corps, No. 9 N.D.H.Q. Transport Company Lansdowne Park
"	Royal Canadian Artillery, 33rd (R) Field Regiment 526 St. Patrick Street
"	Royal Canadian Artillery, 51st (R) L.A.A. Battery Drill Hall, Cartier Square
"	Royal Canadian Corps Signals, Third (R) Canadian Divisional Signals 601 Bank Street
"	Royal Canadian Engineers, Third (R) Field Company 601 Bank Street
"	Royal Canadian Ordnance Corps, Central Ordnance Depot, C.A. Plouffe Park
"	Women's Royal Canadian Naval Service 453 Laurier Avenue, East
"	No. 38 Administrative Unit Argyle Barracks
PEMBROKE	Lanark & Renfrew Scottish Regiment, Second (R) Bn. 177 Victoria Street
PENDLETON	R.C.A.F., No. 10 Elementary Flying Training School
PENETANGUISHENE	Grey & Simcoe Foresters, "D" Company, (Reserve) Headquarters Main Street
PETAWAWA	Camp Headquarters, Petawawa Military Camp
"	Petawawa Internment Camp Centre Lake
"	Petawawa Military Hospital
"	Royal Canadian Ordnance Corps, No. 14 Ordnance Depot
"	R.C.E.M.E., No. 14 Company
PETERBOROUGH	Prince of Wales Rangers, Peterborough Regiment Second (R) Battalion 220 Murray Street
PICTON	Hastings & Prince Edward Regiment, "C" Company Second (R) Battalion Main Street

MUNICIPALITY	NAME OF UNIT
PORT ARTHUR	Headquarters, Current River Barracks Cumberland Street
“ “	H.M.C.S. “Griffon” 125 North Algoma Street
“ “	Lake Superior Regiment, C.A., Second (R) Battalion 317 Park Street
PORT COLBORNE	Lincoln & Welland Regiment, “B” Company Second (R) Battalion Clarence Street
PORT HOPE	Midland Regiment, Second (R) Battalion Mill Street
PRESCOTT	“C” Company Brockville Rifles, Second (R) Battalion George Street
ROCKCLIFFE	R.C.A.F. Station
ST. CATHARINES	“A” Squadron, 2/10 (Reserve) Dragoons, C.A. Lake Street
“ “	Lincoln & Welland Regiment, Seecond (R) Battalion Lake Street
“ “	Tenth (R) Field Battery, Royal Canadian Artillery 75 Lake Street
ST. MARY’S	Perth Regiment, “D” Company, Second (R) Battalion (Motor) Water Street South
ST. THOMAS	Elgin Regiment, Second (R) Battalion Wilson Avenue
“ “	R.C.A.F., Technical Training School R.R. 4
SARNIA	Lambton Garrison, 11th (R) Field Company R.C.E., and 26th (R) 4HL A.A. Battery, R.C.A. 241 Christina Street, North
SAULT STE. MARIE	Sault Ste. Marie & Sudbury Regiment C.A., Second (R) Battalion 118 Brock Street
SIMCOE	No. 25 Canadian Infantry (Basic) Training Centre, C.A.
“	Royal Canadian Artillery, 45th (R) Norfolk Field Regiment Robinson Street
STRATFORD	Perth Regiment, Second (Reserve) Battalion (Motor) 80 Waterloo Street South
SUDBURY	Sault Ste. Marie & Sudbury Regiment, Second (R) Battalion, Sudbury Detachment, C.A. 19 Grey Street

MUNICIPALITY	NAME OF UNIT
TILLSONBURG	“C” Company, Oxford Rifles, (R) Anne Street
TORONTO	Canadian Provost Corps, C.A., No. 31 Company 339 George Street
“	Canadian Women's Army Corps, Garrison Officers' Mess 204 George Street
“	Chorley Park Military Hospital, R.C.A.M.C. North Rosedale
“	Fort York Armoury, Combined Units (Reserve) Fleet Street
“	Headquarters, Military District No. 2 5 Dale Avenue
“	H.M.C.S. “York”, R.C.N.V.R. Division Automotive Building, Canadian National Exhibition Barracks
“	No. 2 Armoured Brigade Workshop, R.C.E.M.E. 61 Albert Street—Top Floor
“	No. 2 District Depot, C.A. (R) Exhibition Barracks, Exhibition Grounds
“	No. 2 Military Research Centre 159 Bay Street
“	No. 49 Administrative Unit, C.W.A.C. 204 St. George Street
“	No. 102 Depot Company, C.W.A.C. Long Branch
“	R.C.A.F., No. 1 Composite Training School 1107 Avenue Road
“	R.C.A.F., No. 3 Convalescent Hospital “Divadale,” Sutherland Drive, Leaside
“	R.C.A.F., No. 4 Release Centre Coliseum Building, Exhibition Grounds
“	R.C.A.F., No. 12 Aeronautical Inspection District 2 Cawthra Square
“	Royal Canadian Corps of Signals, C.A. (Reserve) 185 Spadina Avenue
“	University Avenue Armouries, Men's Canteen (R) University Avenue Armouries
TRENTON	Hastings & Prince Edward Regiment (R) Second Battalion; Support Company; and Battalion Headquarters Quinte Street
“	R.C.A.F., No. 6 Repair Depot

MUNICIPALITY	NAME OF UNIT
TRENTON	R.C.A.F. Station
WALKERTON	97th (R) Field Battery and 1st (R) Field Regiment, Royal Canadian Artillery Jane Street
WELLAND	Lincoln & Welland Regiment, "A" Company Second (R) Battalion Aqueduct Street
WINDSOR	Essex Scottish Regiment, Second (R) Battalion 353 Cartier Place
"	H.M.C.S. "Hunter" 960 Ouellette Avenue
"	No. 1 (R) Infantry Bde. Workshop, R.C.E.M.E. Jackson Park Armoury
"	Thirtieth (Reserve) Reconnaissance Regiment (Essex) Regiment), C.A.C. 357 Cartier Place
"	30th Company Canadian Provost Corps (Windsor Detachment)
WOODSTOCK	Oxford Rifles, Second (Reserve) Battalion Graham Street S-5 Canadian Driving & Maintenance School (A.F.)
NORTH YORK TOWNSHIP	R.C.A.F., No. 1 Equipment Depot North York Township (Weston P.O.)
	R.C.A.F.—War Staff College Wilson Avenue, Armour Heights

STEAMSHIPS

MUNICIPALITY	NAME OF STEAMER	OWNER
MIDLAND	"S.S. North American"	Chicago, Duluth & Georgian Bay Transit Company
SARNIA	"S.S. Noronic"	Canada Steamship Lines Limited
ST. THOMAS	"S.S. Pelee"	Pelee Island Shipping Company
TORONTO	"S.S. Assiniboia"	Canadian Pacific Railway Company
"	"S.S. Keewatin"	Canadian Pacific Railway Company Room 366, Union Station
"	"S.S. Kingston"	Canada Steamship Lines Limited Queen's Quay, Foot of Bay Street
"	"S.S. Manitoba"	Canadian Pacific Railway Company Room 366, Union Station

SCHEDULE No. II

Authorities Not Renewed as of March 31st, 1946

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
AMULREE	Royal Hotel R.R. 1, Stratford	Pedlar, Philip S.
BLYTH	Commercial Hotel	Clare, G. W.
BRUSSELS	Queen's Hotel	Kirby, Mrs. Maude
DUBLIN	Huron Hotel	Mulligan, Paul
DUNKELD	Dunkeld Hotel R.R. 4, Walkerton	Eigenbrod, Mrs. C. P.
GADSHILL	Exchange Hotel R.R. 1	Gerhardt, Geo. C.
GODERICH	Bedford Hotel	Knechtel, Mrs. E. M. and Curry, Mrs. A. E.
"	British Exchange Hotel	Pellow, Mrs. Margaret G.
"	Royal Hotel	The Estate of Margaret Kelly and Miss Mary Loretto Kelly, Administratrix
HENSALL	New Commercial Hotel	Tudor, Stanley
LISTOWEL	Royal Hotel Wallace Street	Fischer, Jos. R.
"	York Hotel Main Street	Fischer, J. R.
MILVERTON	Winston Hotel	McNair, A. D.
MITCHELL	Collison House	Dungey, Wm. John
"	Hicks House	Taylor, Mrs. Mary S.
"	Royal Hotel Huron Street	Cox, Jos. J.
SEAFORTH	Commercial Hotel	Dungey, Mrs. Fanny
"	Dick House	Dick Brothers
"	Queen's Hotel	Lewis, Harry and Corby, Amos
SHAKESPEARE	Shakespeare Hotel	Henerson, David J.
"	Union Hotel	McKone, A. R. and Mrs. Isabel
ST. MARY'S	Garnet House Church Street	Oddy, Miss Fanny

MUNICIPALITY	NAME OF HOTEL	NAME OF OWNER
ST. MARY'S	Royal Edward Hotel 7 Queen Street	Pinney, Mrs. Thos. G.
" "	Windsor Hotel	Graham, Mrs. O. M.
ZURICH	Dominion Hotel	Johnston, Ross H.

CLUBS

ERINDALE	Credit Valley Golf Club
LONG BRANCH	Toronto Golf Club
PORT CREDIT	Canadian Legion B.E.S.L., Branch No. 82 Elizabeth Street
" "	Lakeview Golf Club Limited Dixie Road
" "	Mississauga Golf & Country Club Limited Mississauga Road

NOTE: With the exception of the Dunkeld Hotel, Dunkeld, the foregoing are situated in areas which come under the provisions of the **Canada Temperance Act.**

SCHEDULE No. III

Hotel Authorities Transferred—(233)

April 1st, 1945 to March 31st, 1946

Municipality	Name of Hotel	Transferred from	Transferred to
ACTON	Dominion Hotel Main Street	Holmes, H. F.	Royston, Mrs. M. A.
ALVINSTON	Grand Central Hotel	Williams, Mrs. V.	Simpson, S. S. and Munro, J. D.
AMULREE	Royal Hotel R.R. 1, Stratford	Litt, G. S.	Pedlar, P. S.
ARTHUR	Commercial Hotel George Street	Runge, E. C.	West, W. L. and Bolen, W. R.
AYR	Queen's Hotel Swan Street	Kunda, J.	Targonski, S.
AYTON	Commercial Hotel	Doersam, Estate of J. P.	Doersam, Peter F.
BALA	Bala Bay Lodge	Davey, Chas. and Sandler, N. L.	Davey, Chas.
"	New Windsor Hotel	Carry, M.	Frew, Thomas and Matthew
BARRIE	Clarkson Hotel 130 Dunlop Street	Lang, Harry	White, F. and McElroy, J. E.
"	Clifton Hotel 257 Bradford Street	Kerrigan, S. C. and Mrs. C. L.	Kerrigan, S. C.
"	Simcoe Hotel Five Points	Cohen, Max	Cohen, Max and Dollinger, S.
"	Wellington Hotel	Kennedy, Mrs. F.	Wellington Hotel (Barrie) Limited
BELLEVILLE	Canadian Hotel 37 Dundas Street	Haggis, P.	Canadian Hotel (Belleville) Ltd.
"	Doctor's Hotel 237 Station Street	Briens, A. J.	Briens, A. J. and Mrs. Cecilia
BELLE RIVER	Alexander Beach Grove Hotel R.R. 1, Maidstone Township	Carriere, A. and Rheaume, E.	Carriere, A.
BLEZARD VALLEY	Blezard Hotel	Cayen, L. B.	Dennie, Glenn J.
BLIND RIVER	Harmonic Hotel Woodward Avenue	Seguin, A.	Laforge, O.
BLYTH	Commercial Hotel	Poole, K., St. G.	Clare, G. W.
BLIND RIVER	Riverside Hotel	Laforge, O.	Gauthier, A.
BOURGET	Royal Hotel	Paul, D.	Gagne, R.
BRIGHT	Arlington Hotel	Schade, A. L.	Moss, C. H.
BRIDGEPORT	Lancaster Hotel	Dillon, Mrs. D. O. and Querin, F.	Querin, F.
BRANTFORD	Strand Hotel	Young, G. M.	Craise, R. A.

Municipality	Name of Hotel	Transferred from	Transferred to
BRONTE	Pig & Whistle Inn R.R. 1	Brown, Mrs. L. M.	Mullaney, J. E. and Mrs. O. S.
BROCKVILLE	Garbutt's Hotel 19 King Street, East	Brockville Trust & Savings Company	Ashley, Mrs. Jessie
BURLINGTON	Coronation Hotel 25 Brant Street	Paterson, P. W.	Kozak, M.
CACHE BAY	Cache Bay Hotel Railway Street	Gauthier, A.	Arcand, Jos.
CALEDONIA	Exchange Hotel Argyle Street	O'Rourke, J. M.	Thacker, A.
"	Union Hotel Argyle Street	Leonard, J. J.	O'Meara, D.
CHATHAM	Aberdeen Hotel 1 Grand Avenue, East	Bechard, Miss L. M.	Martin, Jas. C.
CHATSWORTH	Campbell Hotel	Galbraith, M. E. and R. W.	Crawford, J. F. and Mrs. M.
CHESTERVILLE	Dominion Hotel	Flynn, Thos.	Lefebre, A. A.
CHUTE A BLONDEAU	Central Hotel	Berlinguette, W.	Martineau, D.
CLARENCE CREEK	Union Hotel	Lavigne, R.	Gagnon, A.
COCHRANE	Anderson House 179 Fourth Avenue	Marchand, D.	Thiboutot, F. X.
"	Stevens House 223 Railway Street	Stevens, Estate of Arthur	Stevens, Mrs. Francis E.
COBALT	Fraser House 24 Prospect Avenue	Assaf, A.	Abraham, E. A. and R.
CORNWALL	King George Hotel 3 Second Street, East	Kalil, J. M.	Thomas and Nash Ltd.
"	Lloyd George (New Windsor) 15 Pitt Street	Bringloe, C. A. and Gallinger, L. D.	Lloyd George Hotel Company
"	New Windsor (Lloyd George) 15 Pitt Street	LaPlante, Mrs. J.	Bringloe, C. A. and Gallinger, L. D.
CRYSTAL BEACH	Markcity Hotel 7 Cambridge St., E.	Markcity, M.	Balwar, W. and Melynchuk, M. and Onyschuk, P.
" "	Martinell Hotel	Strauch, M.	O'Brien, Mrs. M. E.
" "	Markcity Hotel 7 Cambridge St., E.	Balwar, W. and Melnychuk, M. and Onyschuk, P.	Berezowsky, W.
CRYSIER	Commercial Hotel	Caron, Henri	Brisebois, E. and Martin, D. E.
DESERONTO	Arlington Hotel Main Street	Hall, J. E.	Marck, Stanley R.
DRESDEN	Morgan Hotel Main Street	Carr, H. R. and Weese, D. J.	Weese, D. J.
DRYDEN	Dryden Hotel 74 Queen Street	Self, Estate of C. O. and W. Self	Self, W. and Kelly, Mrs. C. E.

Municipality	Name of Hotel	Transferred from	Transferred to
DRYDEN	Dryden Hotel 74 Queen Street	Kelly, Mrs. C. and Self, W. E.	Self, W. E.
EARLTON	Cecil Hotel	Kerr, R. R.	Paiement, Roger
EGANVILLE	Eganville House	Sammon, Estate of T. A.	Sammon, Miss M.
ELK LAKE	King Edward Hotel	Kell, Mrs. A.	Montpetit, E. and Sauve, L.
“ “	Stonehouse Hotel Fourth Street	Robinson, E. R.	Rusich, Nick and Mrs. M.
ELMWOOD	Queen's Hotel	Hallal, C.	Sainsbury, O.
ELORA	Iroquois Hotel Metcalfe Street	Sachs, R. C.	Wood, J. A.
ENGLEHART	Eldon House	Cruickshank, H. W.	Morris, J.
ERIN	Busholme Inn	Hipkins, E. A.	Fullerton, A. M.
ERIEAU	Lakeview Hotel	Kauzen, W.	Yandrash, I. and Vucic, Vic
ESSEX	Grand Central Hotel Talbot Street	Bolahan, Geo. N. C.	Crowley, L. L.
FERRIS WEST TOWNSHIP	Lakeview Inn	Billington, J. W.	Leach, E. A.
“ “	Lakeview Inn	Leach, E. A.	Leach, Mrs. Margaret
FIELD	Field Hotel	Trottier, O.	Sauve, Leo O. and Phillipe
“	National Hotel	Gervais, N.	Sauve, Leo O. and Phillipe
FORT ERIE	Anglo-American Hotel 280 Niagara Blvd.	Neichenbauer, A., A., C., and E.	Neichenbauer, A., A., C. and A. G. Crawford
“ “	Erie Lane Hotel 33 Princess Street	Hunt, Mrs. A.	Masich, Frank, J. and Nickolas E.
“ “	Howard (Ohio Hotel) 33 Niagara Blvd.	Rung, Mrs. M.	Zajac, A.
“ “	New King Edward Hotel 271 Niagara Blvd.	Velichkovich, T.	Sima, Andrew, Andrew Jr. and Stanko, M.
“ “	Royal Hotel 1 Niagara Blvd.	Davidson, Mrs. K.	Uster, Mrs. V.
FOLEYET	Commercial Hotel	Camirand, J.	Robert, J. and Denommee, M.
FORT FRANCES	Prince Albert Hotel	Eggen, O.	Griffiths, Mrs. M.
“ “	White Pine Inn 800 Scott Street	Eggen, A. L.	Crawford, A. G.
FORT WILLIAM	Adanac Hotel	Crites, D. L.	Crites, Estate of D. L.
“ “	West Hotel	Black, A. J. and Sons	Black, A. J.
GALT	Overland Hotel 18 Concession Street	White, J. A.	White, Mrs. F. E.
GANANOQUE	International Hotel King and Main Streets	Martin, Mrs. A. I.	McGregor, Mrs. A. I.

Municipality	Name of Hotel	Transferred from	Transferred to
GLENCOE	McKellar House	Loosemore, F. G.	Loosemore, Mrs. E.
GRIMSBY	Village Inn 57 Main Street, West	Shafer, R. V. and Mrs. M. K.	Hannah, G. A.
HAMILTON	Bayview Hotel 81 Stuart Street, West	Wilson, J. H. and Bach, H. C.	Senson, Paul
"	Carleton Hotel 659 King Street, East	Berryman, F. J. and Dailey, J.	Berryman, F. J. and L. F.
"	Dog and Gun Hotel 295 York Street	Moore, Chas. C.	Wintonek, D. and Wicinski, J.
"	Iroquois Hotel 94 King Street, West	Fee, Estate of C. A.	Hultay, Wm.
"	Picton Hotel 183 Picton Street, East	Pavlovich, George	Grugos, George
"	Strand Hotel 262 Dundurn Street, S.	King, Lewis	Finch, H. T. and Shadney, P.
"	Sherman Hotel 421 Sherman Ave., N.	Dimarchi, Mrs. U. and Ghilardi, A.	Stecyk, Paul
"	Turbinia Hotel 345 James Street, N.	Wetherup, B. R.	Bencekovich, P. and Holetic, M.
"	Waverley Hotel 632 Barton Street, E.	Hutchinson, W.	Kisil, W.
HAWK JUNCTION	Hawk Junction Hotel	Atkinson, Mrs. C.	Briton, A.
" "	Hawk Junction Hotel	Breton, A.	Flanagan, W. G. O. and Mrs. L. O.
HAWKESBURY	Bridge Inn	Lavigneur, A.	Montpetit, O.
"	Royal Hotel 24 Main Street, West	Hawkesbury Bldg. Company Limited	Martineau, O.
HANMER	Joffre Hotel	Desilets, J. W.	Cayen, L. B.
HASTINGS	Royal Hotel	Condon, John Sr. and J. M. Jr.	Jones, E. W.
HEARST	Windsor Hotel	Bourdon, F. C.	Dupont, R. and Chabot, L.
HEPWORTH	Royal Hotel	Sadler, W. R. and Parrott, A. E.	Bonser, R. A.
HESPELER	Hespeler Hotel	Cornell, J. S.	Jaras, M.
HUNTSVILLE	Dominion Hotel	Simmons, B. C.	Stirling, Mrs. L.
IGNACE	Ignace Hotel	Spetch, Mrs. E. A.	Smilsky, Wm.
KIRKLAND LAKE	Capitol Hotel 60 Second Street	(Transfer Shares) New Townsite Hotel Company	No change
" "	Union Hotel 9 Main Street	Pavlakovich, F.	Pavlakovich, F. and Mihelcic, J.
KITCHENER	Mayfair Hotel 11 Young Street	Lippert, Estate of E.	Mayfair Hotel Limited
KENORA	Dalmore Hotel Main Street	Sauerbrei, John W.	Sauerbrei, Estate of John W.
LA SALLE	Chateau LaSalle Front Road	Lee, D. Y. T.	Lavin, John H.
LANCASTER	Commercial Hotel	Leduc, J. L.	Leigh, M.

Municipality	Name of Hotel	Transferred from	Transferred to
LAVIGNE	Lavigne Hotel	Pilon, V. G.	Martin, J. R.
LEAMINGTON	Auto Stop Inn	Vlasic, I. and Vukmanich, C.	Vlasic, J.
"	International Hotel 35 Erie Street, South	Stickles, L. A.	Shamess, H. A.
"	International Hotel 35 Erie Street, South	Shamess, H. A.	Shames, Estate of H. A.
LINDSAY	Grand Hotel 171 Kent Street, West	Everson, A. H.	Bland, Sam
"	New Royal Hotel 2 Kent Street	Fox, C. J.	Adam, J. S. and Fralick, C. A.
LONDON	St. Regis Hotel 625 Dundas Street	Cochrane, B. H.	Jacques, H. A.
"	York Hotel 216 York Street	Keating, J. J.	Assaf, A.
LUCAN	Central Hotel Main Street	McFalls, W. J.	Parker, J. S.
L'ORIGINAL	Riverview Inn	Millette, Mrs. H.	Dubois, F.
MALDEN TOWNSHIP	Meadows Hotel	Marontate, Mrs. B. L.	Meadows Hotel Ltd.
" "	Reaume Park Hotel (Lake Shore) R.R. 2, Amherstburg	Reaume, E.	Kilgallin, T. V. and Ouellette, W. J.
MARTIN RIVER	Beaverland Hotel	McPhail, C. W.	Handley, A. J. J.
MARATHON	Everest Hotel	Marathon Paper Mills of Canada Limited	Harbour Heights Ltd.
MATACHEWAN	Park Hotel	Bedard, R.	Dalpe, J. A.
MAYNOOTH	Arlington Hotel	Smith, Estate of Mrs. A.	Painter, W. B.
MILTON	Kennedy Hotel Main Street	Kennedy, Chas.	Kennedy, Mrs. Rachel
"	Milton Inn Main Street	Mitchell, J. R.	Armstrong, F. W.
MINE CENTRE	Mine Centre Hotel	Law, Mrs. M.	Law, Estate of Mrs. M.
MERRICKVILLE	Louis Hotel St. Lawrence Street	Louis, Geo. R.	Crawford, Geo. R.
NAPANEE	Paisley Hotel John Street	Fitzpatrick, John H.	Tyson, Edward and Mrs. Jessie A.
NIAGARA FALLS	Clifton Hotel 955 Clifton Hill	Corcoran, J. A.	Benson, W. P. and Gillespie, A. C.
" "	Metropole Hotel Bridge Street	Metro Hotel Company Limited	Cohen, Max and Dawe William A.
" "	Prospect Hotel 1951 Main Street	Ward, Estate of J. E.	Prospect House Ltd.
NIAGARA-ON-THE-LAKE	Prince of Wales Hotel Picton Street	Bilson, J. and Holetic, M.	Bilson, J.

Municipality	Name of Hotel	Transferred from	Transferred to
NIAGARA-ON-THE-LAKE	Prince of Wales Hotel Picton Street	Bilson, J.	Sadowey, J. and Prysko, J. H.
" "	Riverside Hotel	Sherlock, A. E.	Stevens, B.
NEW HAMBURG	Commercial Hotel	Purvis, G.	Paul, Stanley
" "	Imperial Hotel	Rumig, J. A.	Rumig, C. J.
NEW LISKEARD	Grand Union Hotel Whitewood Avenue	Slee, C. A.	Evans, L. S.
NEWTONBROOK	Algonquin Hotel 5797 Yonge Street	Zayats, A. and Dorosh, N.	Zayats, A. and Zaraska, W.
NORTHBROOK	Northbrook Hotel	Donnelly, A. J.	Courneya, U. C. and E. J.
NORTH BAY	Continental Hotel	Kerrigan, S. C. and Mrs. C. L.	Kerrigan, S. C.
OTTAWA	Victoria Hotel 34 Murray Street	Macey, S. G.	Charos, P. G.
PARIS	New Royal Hotel 11 Mechanic Street	Brownlee, R. T.	Hynes, J. W.
PELEE ISLAND	Pelee Hotel	Holtze, L. C. and Mrs. M.	Holtze, L. C.
" "	Pelee Hotel	Holtze, L. C. and J. L.	Holtze, L. C. and Mrs. M.
PEMBROKE	Mackay House 185 Pembroke St., E.	Leigh, M.	Costin, E. R.
PENETANG	Canada House 85 Main Street	Cloutier, Mrs. M.	Allen, J. D. and Renton, A. E.
PETERBORO	Empress Hotel 131 Charlotte Street	Graham, C. G. and Graham, G. K.	Empress Hotel (Peterboro) Ltd.
PICTON	Globe Hotel Main Street	Kerrigan, S. C. and Mrs. C. L.	Kerrigan, S. C.
"	Globe Hotel Main Street	Kerrigan, S. C.	Cox, J. J.
PORT COLBORNE	Colonial Hotel 124 West Street	Woods, J. A.	Milligan, H. F.
PORT DALHOUSIE	Port Hotel 6 Front Street	Maxwell, W. H.	Chaikowski, D. C. and Kmit, Y.
PORT ELGIN	Arlington Hotel	Baker, Mildred	McGrath, E.
" "	Queen's Hotel	McPherson, R. and McGee, A. E.	McPherson, R.
PORT STANLEY	Orion (Plaza) Hotel William Street	Bartholomew, Jas. C.	Kohn, S.
" "	Why Not Hotel	Boug, Mrs. Doris	Weir, Mrs. Doris Boug
PORT HOPE	Ontario Hoteel 30 Ontario Street	Lavin, J. H. and McElroy, J.	Powell, B. H. and Tweedle, E. H.
" "	Ontario Hotel 30 Ontario Street	Powell, B. H. and Tweedle, E. H.	Powell, B. H.
PRESCOTT	Daniels Hotel	Doyle, J. P.	Korsa, Nicholas
PRESTON	Sulphur Springs Hotel 240 King Street	Jaras, M. and Markus, J.	Markus, J.

Municipality	Name of Hotel	Transferred from	Transferred to
RAINY RIVER	Rainy River Hotel	Desorcy, Mrs. K.	Popowich, Wm.
RED LAKE	McCuaig Hotel	McCuaig Hotel Company Limited	McCuaig (Red Lake) Hotel Co. Ltd.
RIVER CANARD	Palm Beach Villa	Desjardin, Albert	Desjardin, Mrs. A.
ROCKLAND	Rockland Hotel	Menard, J.	Viau, A.
"	King George Hotel 143 Laurier Street	Laframboise, J.	Gamelin, A.
ROUGE HILLS	Glen Eagles Manor	Glen Eagles Manor Hotel Limited	Dnieper, Peter
ROYAL MUSKOKA	Royal Muskoka (Transfer Shares)	Muskoka Lakes Navigation Co.	no change
RUSSELL	Russell House	Brunette, A.	Sculland, F. M.
SALTFLEET	Derby Inn	Derbyshire, J. R.	Neichenbauer, E. and A. and Varyu, N.
"	Derby Inn	Neichenbauer, E. and A. and Varyu, N.	Neichenbauer, E. and Varyu, N.
SAULT STE. MARIE	Algonquin Hotel 864 Queen Street, E.	Sisson, Mrs. H.	Paterson, P. W.
" "	Royal Hotel 2 Queen Street, East	Keenan, Mrs. C. E.	Keenan, B. P.
SHAKESPEARE	Union Hotel Box 195	Burgess, Mrs. A.	McKone, A. and Mrs. I.
SCHUMACHER	Recreational Hotel 32 First Avenue	McGuire, M. P.	Larche, N.
SIMCOE	Melbourne Hotel 39 Robinson Street	Crocock, H. J.	Challenger, D. R. and C. E.
"	Norfolk Hotel 41 Norfolk Street	Lockard, W.	Dumsha, J.
SMOOTH ROCK FALLS	Elite Hotel	Hudson, T.	Philipchuk, Mrs. E.
SOUTHAMPTON	Lowry (Southampton Hotel)	Lowry, Mrs. S. A.	Smith, L. A.
SPANISH STATION	Huron Hotel	Beauchamp, J.	Ferris, M. E.
STAMFORD	Montrose Hotel R.R. 2	Lett, W.	Snell, F. A. and Antonia, J.
STRATFORD	Avon Hotel 388 Downie Street	Kerrigan, S. C. and Mrs. C. L.	Kerrigan, S. C.
"	Dominion Hotel	Sharpe, A. J.	Wilton, R.
STONEY CREEK	Da-Nite Hotel	Mather, A. P.	Geekie, Wm.
ST. EUGENE	Windsor Hotel	Landriault, R.	Landriault, A.
ST. ISADORE DE PRESCOTT	Central Hotel	Martin, C.	Lalonde, C.
ST. JOACHIM	St. Joachim Hotel	Guilbeault, Estate of S.	Rockburn, Harvey
STURGEON FALLS	Windsor Hotel	Chaput, Mrs. H. C.	Chaput, Estate of Mrs. H.

Municipality	Name of Hotel	Transferred from	Transferred to
STONEY CREEK	Pines Hotel 145 Lake Avenue	Galbraith, F. J.	Phoenix, W. C. and Mrs. W. C.
SUDBURY	Nickel Range Hotel 10 Elm Street, West	Nickel Range Hotel Company	Nickel Range Hotel (Sudbury) Ltd.
"	Paris Hotel 24 Borgia Street	McVety, H. H. and Mrs. I.	Trottier, O. and Mrs. Eva
TECUMSEH	Renaud Inn 103 Tecumseh Road	Renaud, E. J.	Fabra, C. and Dudley, L.
THESSALON	Sinton Hotel Main Street	McCartney, Mrs. J.	Sinton, S. M.
THOROLD	Summitt House Front Street	Stecyk, P.	Cuiniak, W. and Bruch, M.
"	Thorold Inn 54 Front Street	Ellison, H.	Kekic, Peter
TILLSONBURG	Imperial Hotel 30 Broadway Street	Bringloe, A. E. and W. A.	Bringloe, Mrs. A. E.
TIMMINS	Grand Hotel 56 Third Avenue	Mason, P. A.	Cimetta, N. and Mrs. M.
"	St. Charles Hotel 16 Cedar Street	Spiala, G. and Irmie V.	Vaillancourt, L. and R.
"	Timmins Hotel 56 Fourth Street	Jamsa, Estate of O.	Jamsa, Mrs. A.
"	Welcome Hotel 7 Spruce Street, S.	Denesavitch, Estate of J.	Denesavitch, Mrs. O. and Lavich, L.
TORONTO	Alexandra Hotel 102 Queen Street, W.	Humeniuk, J. and Kokor, P.	Humeniuk, J.
"	Broadview Hotel 106 Broadview Ave.	Crawford, S. B.	Dunlop, Alfred E.
"	Breadalbane Hotel 2-8 Breadalbane St.	McLaughlin, F. and Corson, R. R.	Breadalbane Hotel Limited
"	Clyde (Albany) Hotel 158 King Street, East	Rowalchuk, Wm.	Diakin, John
"	Derby Hotel 393 King Street, East	Salonen, C. and Stuart, G. T.	Derby Hotel (Toronto) Ltd.
"	Dennis Hotel 238 Broadview Ave.	Dennis, B.	Melnick, J.
"	Edgewater Hotel 10 Roncesvalles Ave.	Hammer, F.	Onazuk, M. and Dimitroff C. and A. Harris
"	Good Hotel 572 Bay Street	Good, A.	Good, Mrs. P.
"	Gladstone Hotel 1208 Queen Street, W.	Ryan, F. M.	Gladstone Hotel Ltd.
"	Isabella Hotel 556 Sherbourne Street	Heisey, Mrs. A.	Heisey, Estate of K. B.
"	Jarvis Hotel 103 Jarvis Street	Flanigan, Mrs. V. M.	Onrot, Mrs. Belle
"	Lansdowne Hotel 1744 Dundas St., W.	Ryan, Mrs. J. K.	Lansdowne Enterprises Ltd.

Municipality	Name of Hotel	Transferred from	Transferred to
TORONTO	Oxford Hotel (Transfer Shares) 930 King Street, West	Ticonic Corporation Limited	no change
"	Piccadilly Hotel (Transfer Shares)	Piccadilly Hotel Company Limited	no change
"	Riviera Hotel 197 King Street, East	Deakin, J.	Humeniuk, T. and Syko, Mrs. M.
"	Tusco Hotel 235 Jarvis Street	Tusco Hotel Limited	Tusco Hotel Limited (Share Transfer)
"	Victoria Hotel 56 Yonge Street	Elliott, M. J.	Victoria Hotel (Toronto) Ltd.
"	Victory Hotel 418 Bay Street	Assaf, W. E.	Assaf, W. E. and Mrs. Eva
VAN WAGNER'S BEACH	Edgewater Hotel R.R. 5, Hamilton	Corey, M. L.	Marks, C.
WELLESLEY	Royal Hotel Queen and William Streets	Karwaski, J.	Pirce, Louis
WATERDOWN	Kirk House Main and Dundas Streets	Kirk, J. L.	Kirk, J. L. and Mrs. A. I. and Miss M. A.
WARDSVILLE	Wilson (Wardsville Inn) Main Street	Wood, W. J.	Muir, T. A.
WARREN	Globe Hotel	Sauve, D.	Boucher, H. F.
WASAGA BEACH	Nottawa Inn	Hacker, C. F.	Nottawa Inn Limited
WELLAND	Commercial Hotel 62 King Street	Anderson, C. W.	Sher, D. and S. Saltzman
"	Reeta Hotel 90 Main Street, East	F. J. Cooper	Hotel Reeta Limited
"	Welland Hotel 3 Niagara Street	Price, F. H.	Kunda, John and Stella
WELLESLEY	Queen's Hotel	Miller, C. J.	Logel, J. S.
WIARTON	Pacific Hotel Berford Street	Lymburner, A. B.	Walker, A. G. and R. A.
WINDSOR	Arlington Hotel 891 Erie Street	Arlington Hotel Limited	Bilson, John and Mary
"	Bellvue Hotel 1271 Sandwich St., E.	Raletich, I. and Opacich, S.	Mandich, G. and Opacich, B.
"	Bridge Avenue Hotel 1886 London St., W.	Lond, M. J.	Vida, M.
"	Dixie Hotel 1080 Erie Street, East	Nikilchuk, Olga and Pete	Schiller, Mrs. E.
"	Essex House 317 Sandwich St., East	Woolcott, Mrs. A.	Kovarbacih, P. and Todorovich, G.
"	Howard Hotel 1534 Howard Avenue	Ouellette, L.	Foley, Mrs. Mary
"	Palace Hotel 939 Drouillard Road	Pucai, V.	Moskalyk, S. and Mrs. Jean
"	Royal Hotel 4877 Wyandotte St., E.	Bell, Mrs. M. and Gilbee, Mrs. I.	Radonich, M. and Tarailo, D.
"	Rex Hotel 1116 Drouillard Road	Bush, Mrs. E. M.	Lysy, M. and Nikon, N.
"	Southwood Hotel 1353 Wellington Street	Bielich, M. and Manich, G.	Bielich, M.
YORK MILLS	New Jolly Miller 3885 Yonge Street	McEvoy, F. M.	New Jolly Miller Hotel Limited

SCHEDULE No. IV

Authorities Suspended—(59)

April 1st, 1945 to March 31st, 1946

Municipality	Name of Hotel	Name of Owner	Period from	to
CACHE BAY	Travellers Hotel	St. George, L.	Mar. 18	Mar. 31
CHATHAM	Merrill House	Harris, Louis	Sept. 15	Sept. 25
CHESTERVILLE	Dominion Hotel	Lefebvre, A. A.	Dec. 19	Jan. 4
CLARENCE CREEK	Union Hotel	Lavigne, R.	Oct. 2	Oct. 18
COCHRANE	London Hotel	Chamandy, Mrs.	Oct. 2	Nov. 3
COURTRIGHT	Bedard Hotel	Bedard, Mrs. J.	Feb. 16	Mar. 2
CORNWALL	Central Hotel	Miller, J.	Apr. 19	May 2
"	St. Lawrence Hotel	Mercier, A.	Apr. 11	May 28
DRESDEN	Morgan Hotel	Weese, D. J.	Feb. 16	Mar. 8
DUNNVILLE	New Royal	Hensgens, J.	Jan. 23	Feb. 22
FORT ERIE	Ohio Hotel	Zajac, A.	Jan. 16	Feb. 1
" "	Merview Hotel	Compton, M.	Mar. 30 (still in force Mar. 31, 1946)	
FORT WILLIAM	Alexandra Hotel	Zaroski, W.	Feb. 7 (still in force Mar. 31, 1946)	
HAMILTON	Britannia Hotel	Watson, Mrs. J. G.	Jan. 22	Feb. 1
"	Homeside Hotel	Taylor, Rosart O.	Jan. 4	Feb. 7
"	Waverley Hotel	Hutchinson, W.	Nov. 14	Nov. 26
KINGSTON	Windsor Hotel	Gilmour, Mrs.	Mar. 30 (still in force Mar. 31, 1946)	
"	Royal Hotel	Kingston Hotel Company Ltd.	Mar. 23	Mar. 30
LINDSAY	Grand Hotel	Bland, Sam	Oct. 24	Nov. 2
L'ORIGINAL	Riverview Inn	Dubois, F.	Dec. 21	Jan. 5
MARYSVILLE	Marysville Hotel	Fahey, J. V.	Aug. 16	Aug. 22
NIAGARA FALLS	Venetian	Briand, J.	Jan. 16	Jan. 31
NORTHBROOK	Northbrook Hotel	Donnelly, A. J.	Dec. 6	Dec. 21
OTTAWA	Bytown Inn	Brigham, T. G.	Dec. 14 (still in force Mar. 31, 1946)	
"	King Edward Hotel	Terminal Hotels	Mar. 22 (still in force Mar. 31, 1946)	
"	Pacific Hotel	Dore, L.	Dec. 21	Dec. 29
"	Victoria Hotel	Charos, P. G.	Mar. 15 (still in force Mar. 31, 1946)	
PARIS	New Royal Hotel	Brownlee, R. T.	Nov. 14	Dec. 8
PORT DOVER	Erie Beach Hotel	Brugos and Almassy	July 23	Aug. 10
PORT STANLEY	Why Not Hotel	Weir, Mrs. Doris	Feb. 16	Mar. 2

Municipality	Name of Hotel	Name of Owner	Period from	 to
RIVERSIDE	Edgewater Hotel	Thomas' Inn Ltd.	July 9	July 25
RUSSELL	Russell House	Sculland, F. M.	Dec. 4	Dec. 19
SARNIA	Windsor Hotel	Taylor, C. L.	Feb. 16	Mar. 8
SAULT STE. MARIE	Algoma Hotel	Cohen, W. M. N.	Jan. 5	(still in force Mar. 31, 1946)
SIMCOE	Governor Simcoe Hotel	Leask, F. A.	Feb. 16	Mar. 2
"	Norfolk Hotel	Dumsha, J.	Jan. 29	Feb. 9
SPANISH STATION	Huron Hotel	Ferris, M. E.	Jan. 29	Mar. 1
ST. CATHARINES	Ontario Hotel	Bagdasarian, M.	Jan. 16	Feb. 1
ST. THOMAS	Queen's Hotel	Deratnay, M.	Feb. 7	Mar. 7
SUTTON WEST	Sutton Inn	Miller, E.	Dec. 4	Dec. 18
TEMAGAMI	Goddard's Hotel	Goddard, E. F.	Mar. 28	(still in force Mar. 31, 1946
TORONTO	Alexandra Hotel	Humeniuk and Kobor	Apr. 9	Apr. 19
"	Alexandra Hotel	Humeniuk, J.	Mar. 19	(still in force Mar. 31, 1946)
"	Beresford Hotel	Glass and Waxman	May 16	May 18
"	Carls-Rite	Peninsula Co.	Sept. 15	Oct. 4
"	Carls-Rite	Peninsula Co.	Feb. 15	(still in force Mar. 31, 1946)
"	Commodore Hotel	Hershoran, H.	Mar. 4	Mar. 18
"	Edwin Hotel	Sher, D. and Saltzman, S.	Mar. 29	(still in force Mar. 31, 1946)
"	Walker House	Walker House Hotel Company	Aug. 8	Aug. 22
"	Waverley Hotel	Waverley Hotel Co.	Jan. 24	Jan. 29
WALLACEBURG	Tecumseh Hotel	Mahoney, A. J.	Feb. 15	Mar. 18
WINDSOR	Bellvue Hotel	Mandich & Opacich	Sept. 5	Sept. 25
"	Dominion Hotel	Boyer, W. H.	Sept. 5	Sept. 12
"	Howard Hotel	Ouellette, L.	Nov. 1	Dec. 20
YORK MILLS	New Jolly Miller Hotel	New Jolly Miller Hotel Company	Jan. 16	Feb. 1

CLUBS

SARNIA	Sarnia Service Club	Feb. 15	Mar. 1
SAULT STE. MARIE	Troubadour Club	Dec. 19	(still in force Mar. 31, 1946)
TORONTO	Fourth Battalion Club	Nov. 26	(still in force Mar. 31, 1946)
WINDSOR	Army and Navy Veterans, Unit No. 30	Oct. 18	Nov. 19

SCHEDULE No. V

Statement of Expenses

April 1st, 1945 to March 31st, 1946

Salaries	$ 89,897.15
Rent	1,935.00
Travelling Expenses	36,249.69
Postage	1,793.91
Stationery and Printing	4,394.05
Telephone and Telegraph	912.57
Heat, Light and Power	180.00
Advertising	490.65
Equipment Rental	180.00
Deputy Registrars' Expenses	73.50
Express Charges	39.11
Maintenance (Miscellaneous)	1,982.70
Remuneration of Deputy Registrars	7,815.00
Audit Fees	4,250.00
Superannuation	1,221.74
TOTAL	$151,415.07

488943
Ontario. Legislative Assembly
Sessional papers. v.79,pt.4

1947

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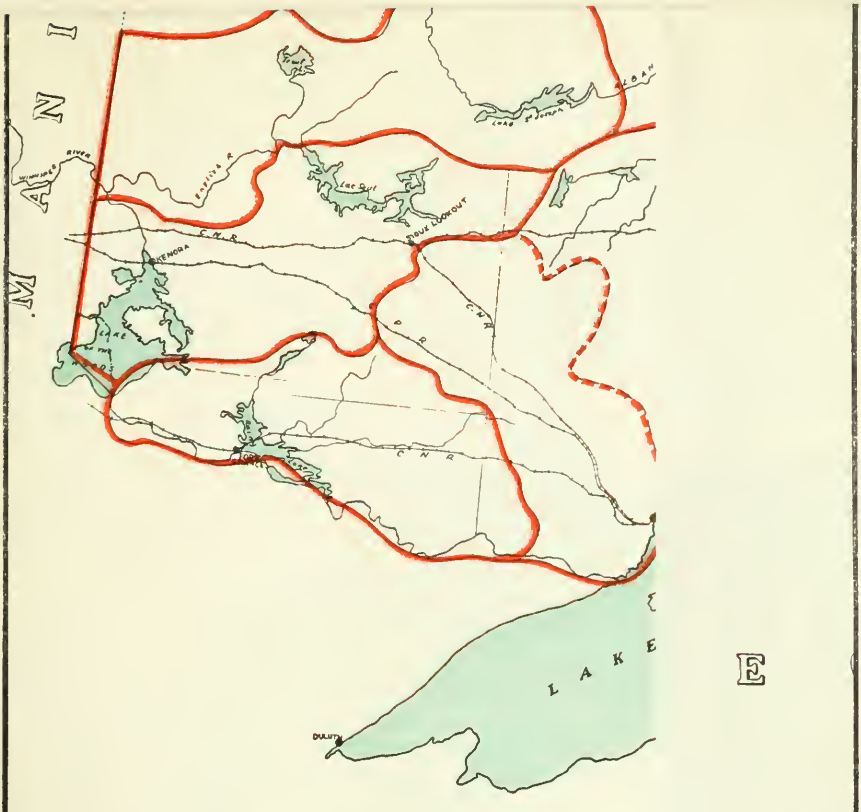
LOWE-MARTIN CO. LIMITED


M A N I
Winnipeg River
English R
Trout L.
Lake St Joseph
ALBAN
Lac Seul
Sioux Lookout
C.N.R.
Kenora
C.P.R.
C.N.R.
Lake of the Woods
Rainy L.
Fort Frances
Rainy Lake
C N R
L A K E
E
Duluth

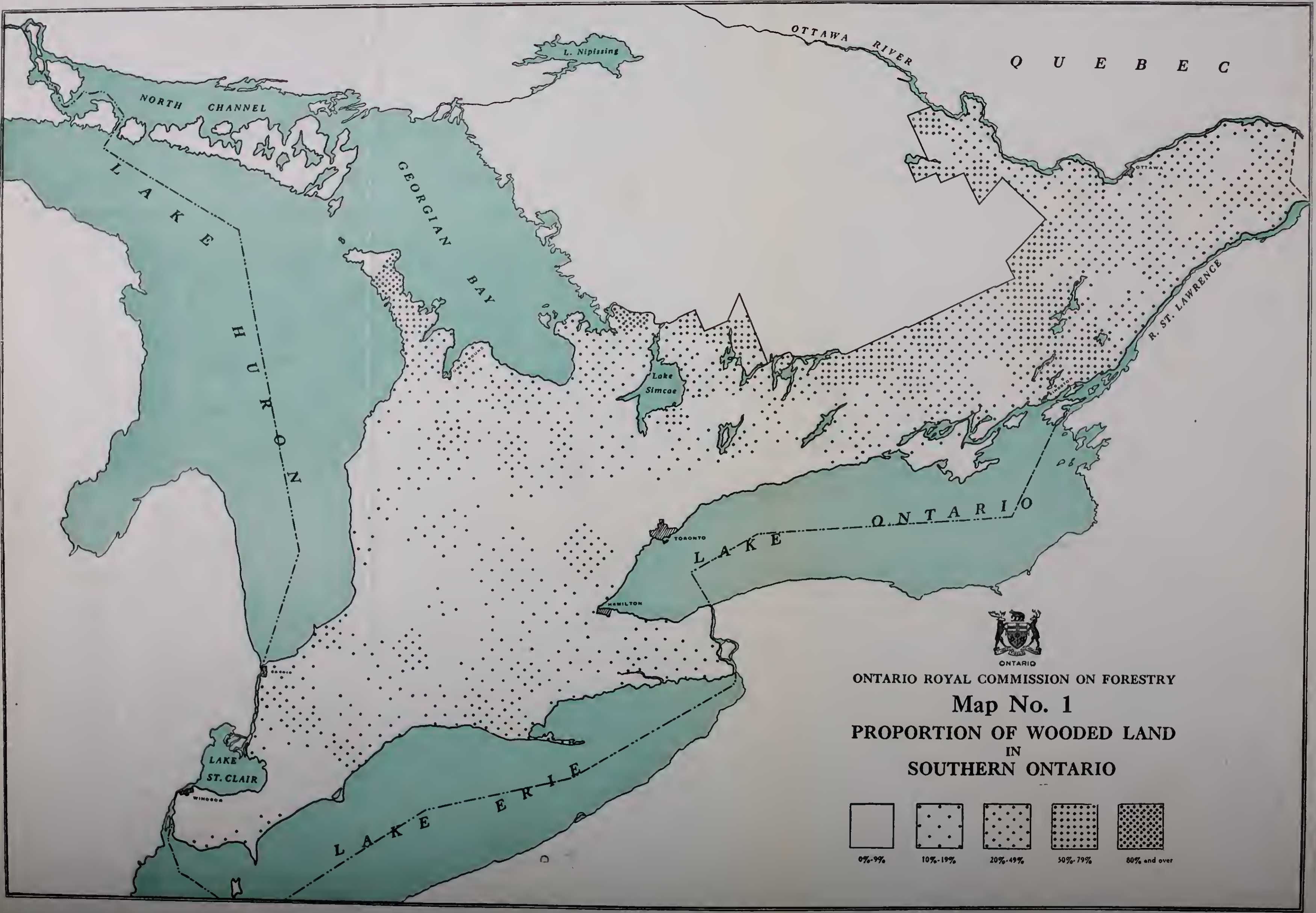
ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

MAP No. 6

POSSIBLE DIVISIONS
—FOR—
FOREST OPERATING COMPANIES

25 0 25 50 75 100 Miles

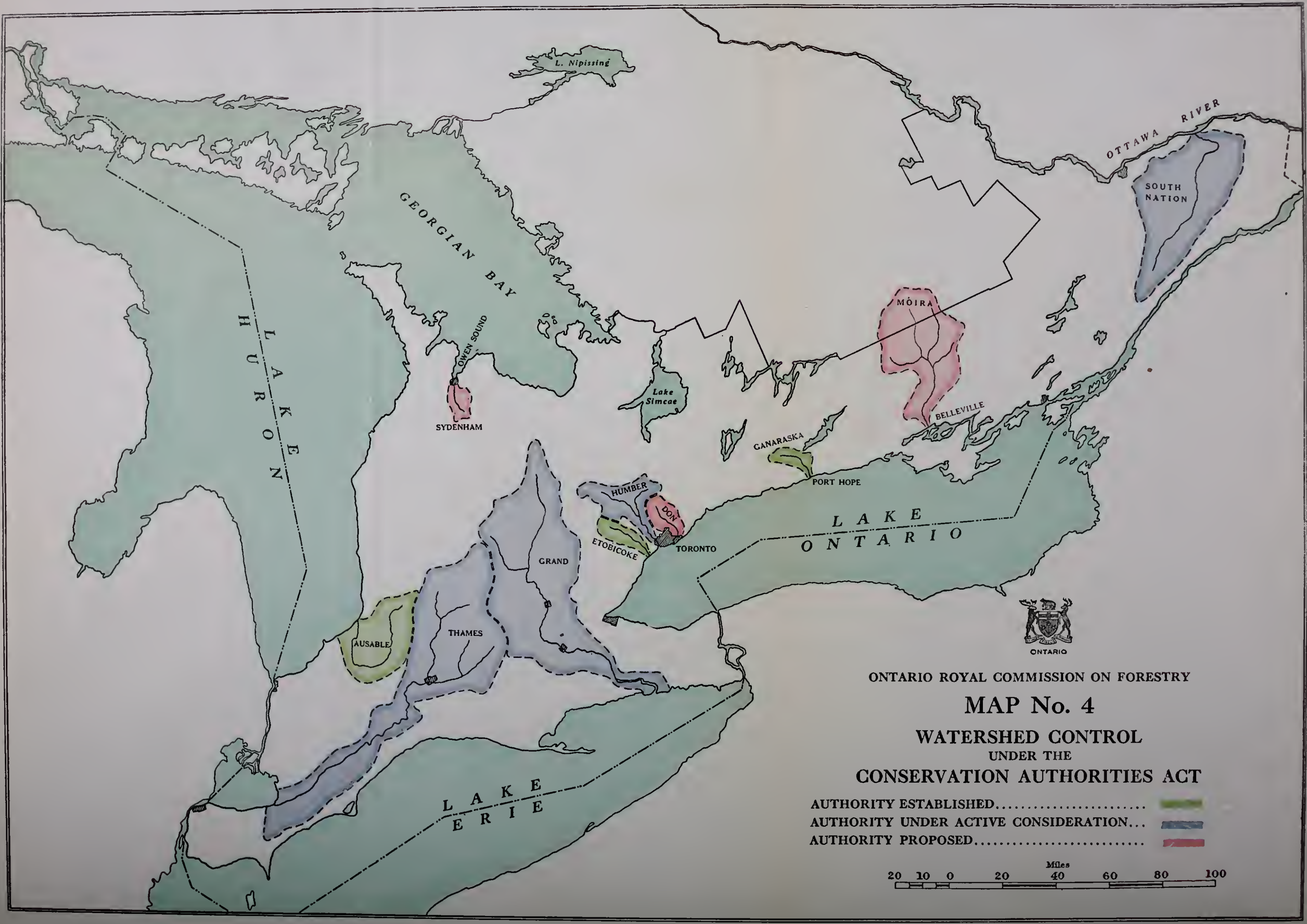

L. Nipissing
OTTAWA RIVER
QUEBEC
NORTH CHANNEL
LAKE HURON
GEORGIAN BAY
OWEN SOUND
Lake Simcoe
OTTAWA
KINGSTON
R. ST. LAWRENCE
TORONTO
LAKE ONTARIO
HAMILTON
SARNIA
LAKE ST. CLAIR
WINDSOR
LAKE ERIE
0%-9%
10%-19%
20%-49%
50%-79%
80% and over

ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

Map No. 1

PROPORTION OF WOODED LAND IN SOUTHERN ONTARIO



ONTARIO ROYAL COMMISSION ON FORESTRY

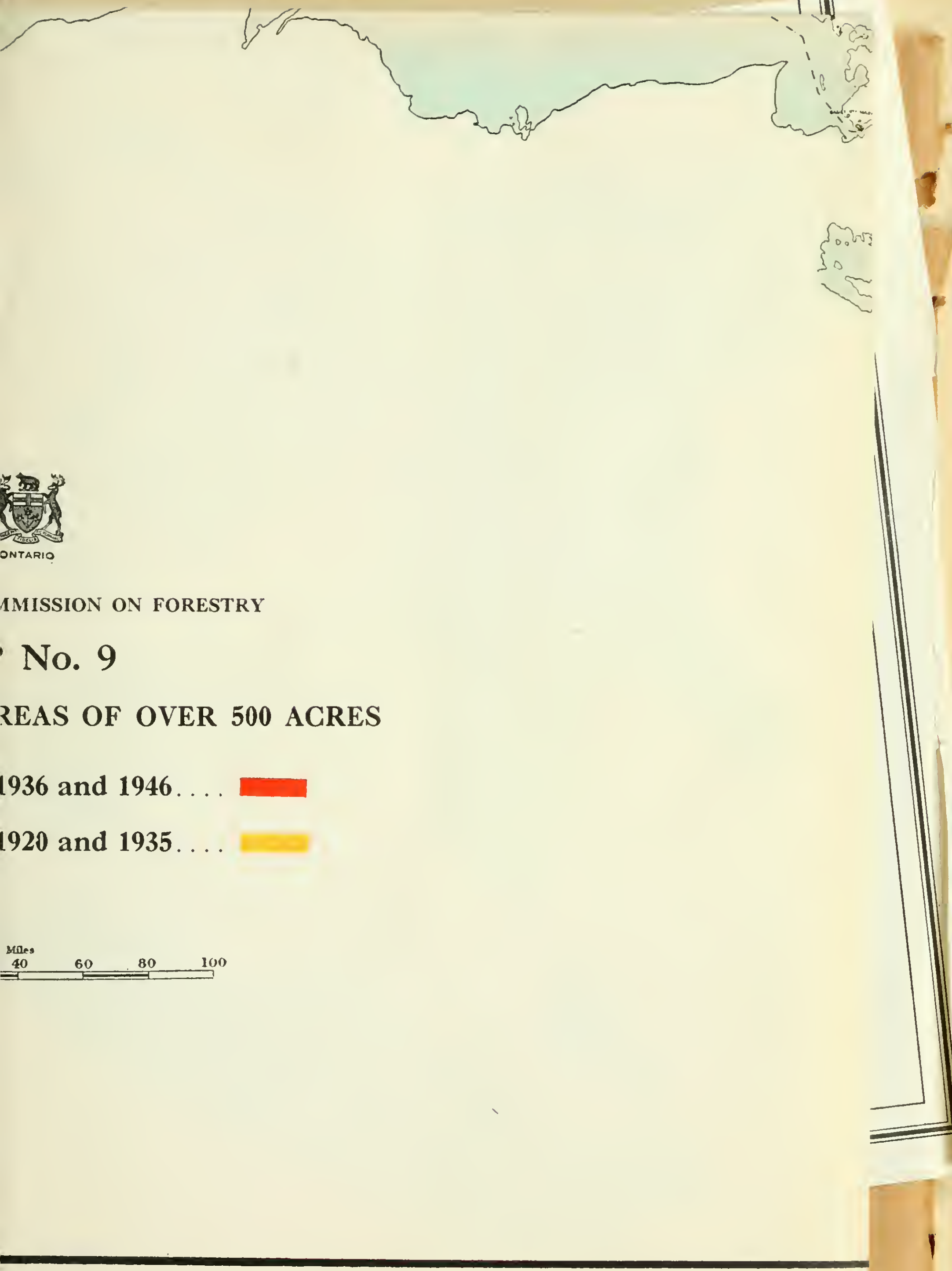
MAP No. 4

WATERSHED CONTROL

UNDER THE

CONSERVATION AUTHORITIES ACT

AUTHORITY ESTABLISHED........................ 🟩
AUTHORITY UNDER ACTIVE CONSIDERATION... 🟦
AUTHORITY PROPOSED........................... 🟥
Miles
20 10 0 20 40 60 80 100
ONTARIO
L. Nipissing
GEORGIAN BAY
LAKE HURON
OWEN SOUND
SYDENHAM
Lake Simcoe
OTTAWA RIVER
SOUTH NATION
MOIRA
BELLEVILLE
GANARASKA
PORT HOPE
HUMBER
DON
ETOBICOKE
TORONTO
LAKE ONTARIO
GRAND
THAMES
AUSABLE
LAKE ERIE



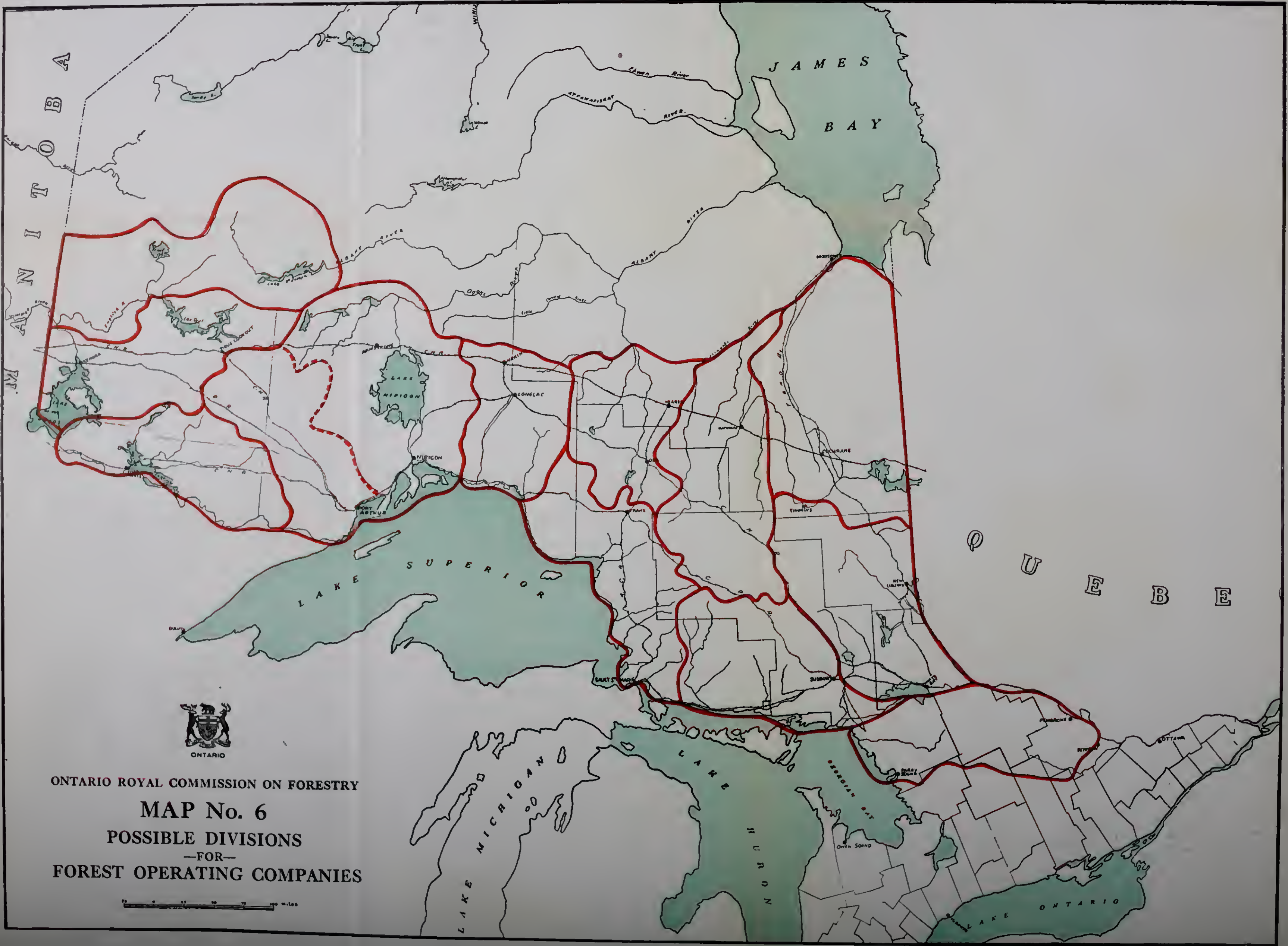
ONTARIO

MMISSION ON FORESTRY

No. 9

REAS OF OVER 500 ACRES

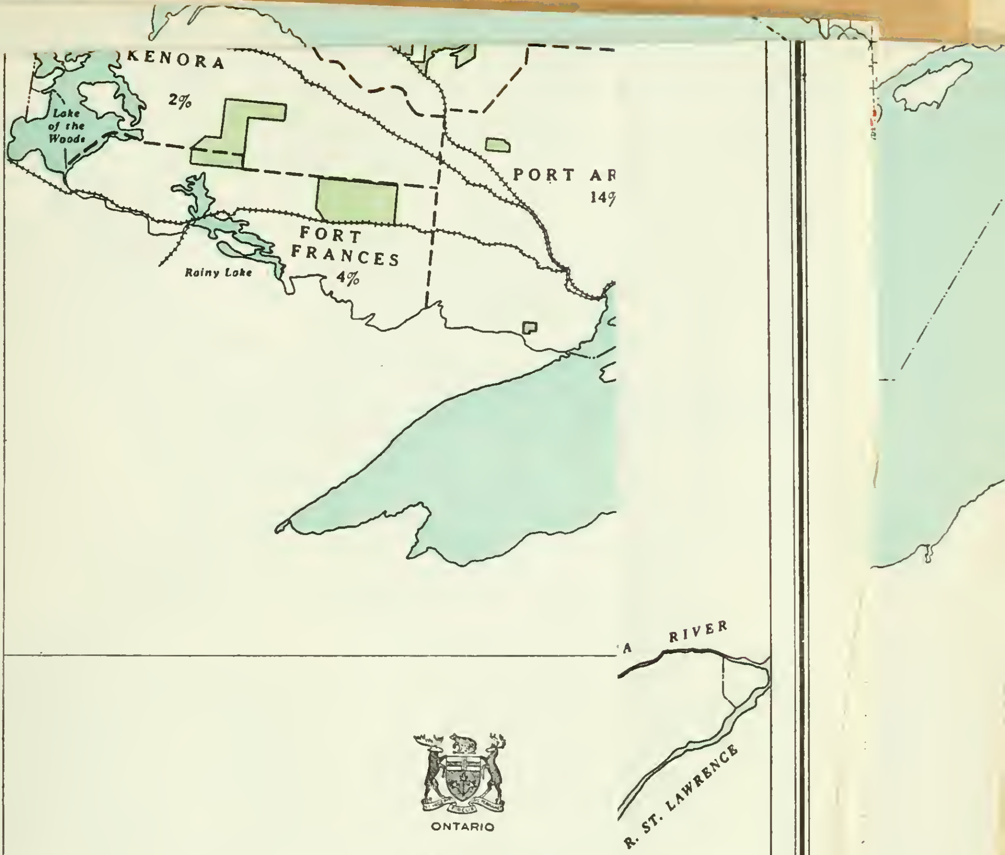
1936 and 1946.... 🟥
1920 and 1935.... 🟨
Miles
40
60
80
100


MANITOBA
JAMES BAY
Ekwan River
Attawapiskat River
Albany River
Ogoki River
Lake St. Joseph
Lac Seul
C.N.R.
C.P.R.
Lake Nipigon
Nipigon
Port Arthur
Nakina
Longlac
Hearst
Kapuskasing
Cochrane
Moosonee
T.&N.O. Ry.
Franz
A.C.R.
Timmins
New Liskeard
QUEBEC
LAKE SUPERIOR
Duluth
Sault Ste. Marie
Sudbury
North Bay
Pembroke
Renfrew
Ottawa
Parry Sound
LAKE MICHIGAN
LAKE HURON
GEORGIAN BAY
Owen Sound
LAKE ONTARIO
ONTARIO
miles

ONTARIO ROYAL COMMISSION ON FORESTRY

MAP No. 6

POSSIBLE DIVISIONS
—FOR—
FOREST OPERATING COMPANIES


KENORA
2%
Lake of the Woods
PORT AR
14%
FORT FRANCES
4%
Rainy Lake
A RIVER
R. ST. LAWRENCE

ONTARIO

ONTARIO ROYAL COMMISSION ON F

MAP No. 5

Districts of Origin of Pulpwoo

(BASED ON 1946-47 EXPORT COMMITM

PRINCIPAL AREAS OF CROWN LANDS FRO
EXPORTS OF PULPWOOD ARE PERMITTED..

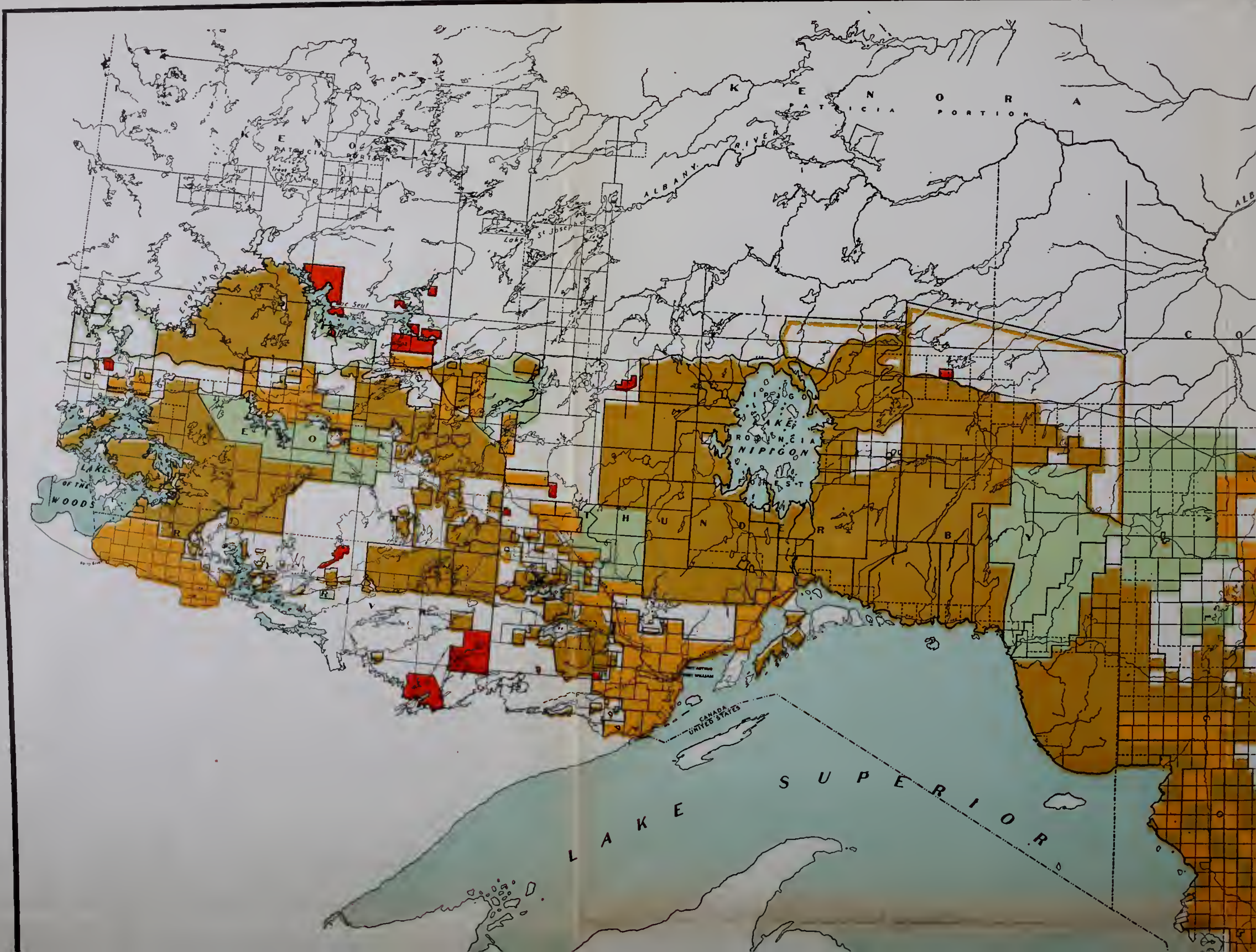
FIGURES SHOW THE PERCENTAGE OF TH
EXPORTS OF PULPWOOD, BOTH FROM CROW
AND PRIVATE LANDS, WHICH ORIGINATES
DISTRICT ....

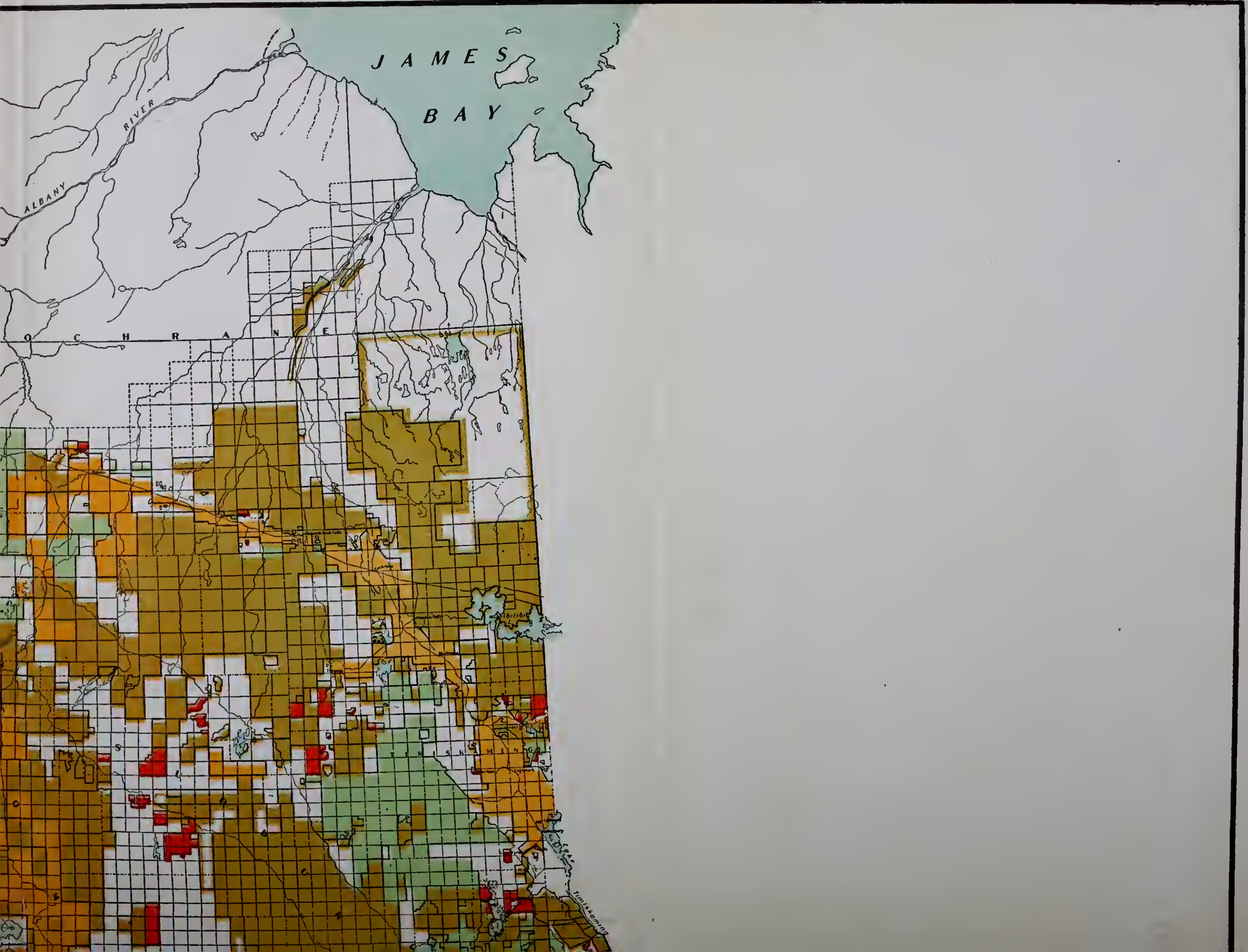
ESTRY

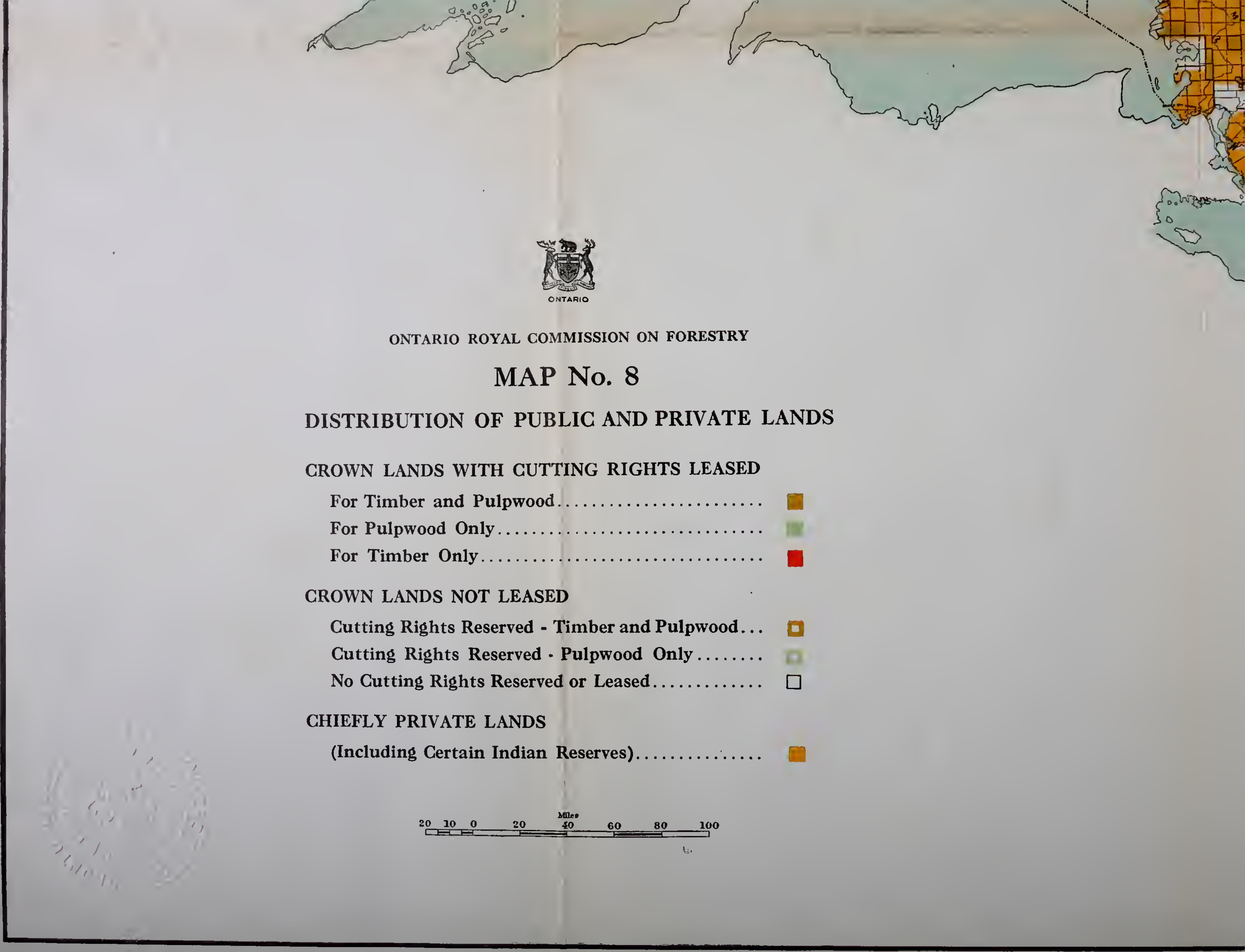
RESTS

. . . . . 🟥

. . . . . 🟩


K E N O R A
PATRICIA PORTION
ALBANY RIVER
Lake St Joseph
Trout L.
Lac Seul
English R.
K E N O R A
LAKE OF THE WOODS
R A I N Y R I V E R
LAKE NIPIGON
NIPIGON FOREST RESERVE
T H U N D E R B A Y
PORT ARTHUR
FORT WILLIAM
CANADA
UNITED STATES
L A K E S U P E R I O R
C O
ALB


JAMES BAY
ALBANY RIVER
O C H R A N E
Abitibi L.
T I M I S K A M I N G
Timiskaming



ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

MAP No. 8

DISTRIBUTION OF PUBLIC AND PRIVATE LANDS

CROWN LANDS WITH CUTTING RIGHTS LEASED

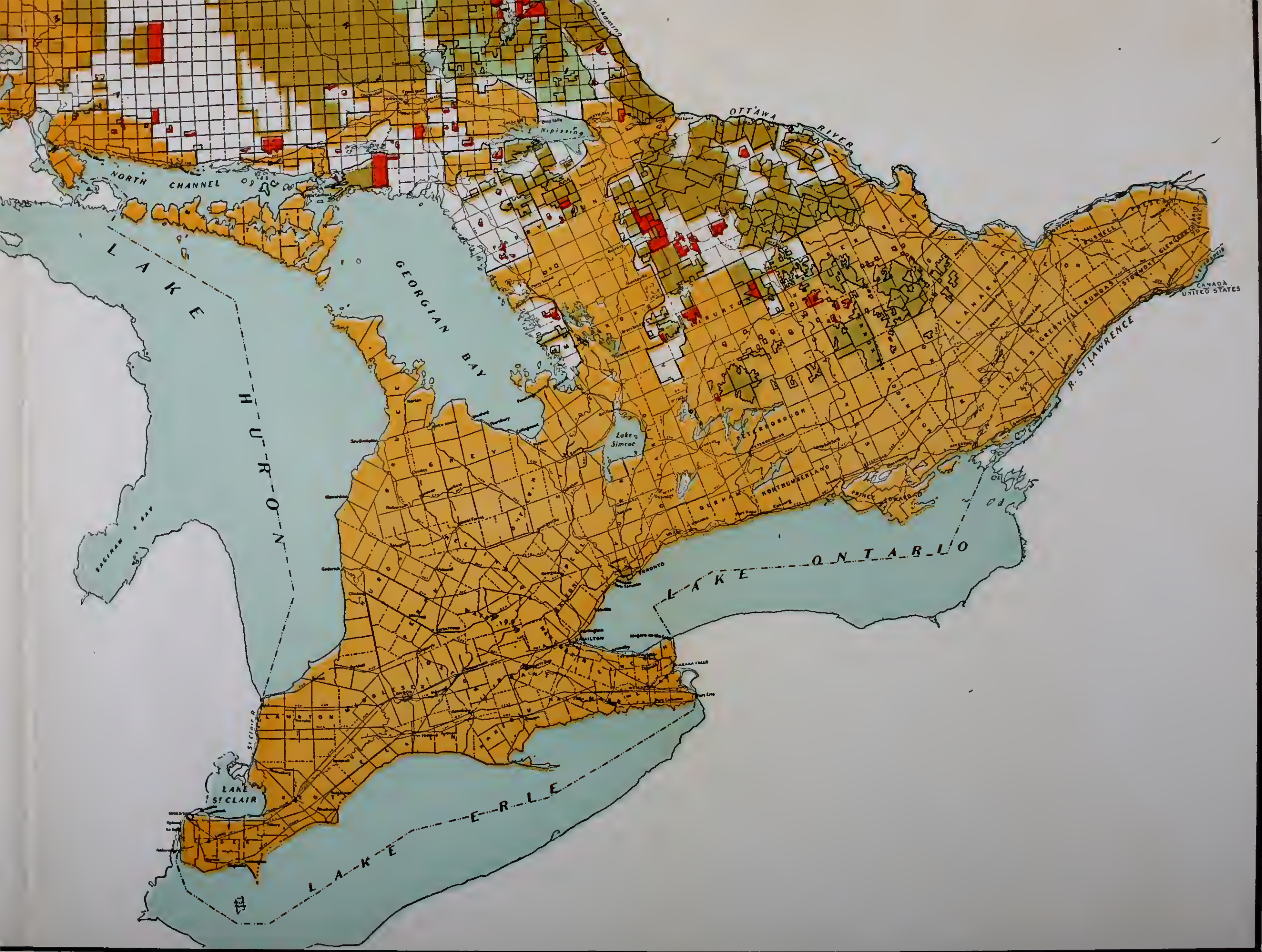
For Timber and Pulpwood	🟧
For Pulpwood Only	🟩
For Timber Only	🟥

CROWN LANDS NOT LEASED

Cutting Rights Reserved - Timber and Pulpwood	▣
Cutting Rights Reserved - Pulpwood Only	▣
No Cutting Rights Reserved or Leased	☐

CHIEFLY PRIVATE LANDS

(Including Certain Indian Reserves)	🟧


NORTH CHANNEL
Nipissing
OTTAWA RIVER
LAKE HURON
GEORGIAN BAY
SAGINAW BAY
Lake Simcoe
PETERBOROUGH
NORTHUMBERLAND
DURHAM
PRINCE EDWARD
LANARK
RUSSELL
GLENGARRY
STORMONT
DUNDAS
GRENVILLE
LEEDS
R. ST LAWRENCE
CANADA
UNITED STATES
TORONTO
HAMILTON
LAKE ONTARIO
LAMBTON
MIDDLESEX
LAKE ST. CLAIR
LAKE ERIE

ONTARIO

OMMISSION ON FORESTRY

P No. 11

ND PULP AND PAPER MILLS

,000 f.b.m. Annually......... ●

100,000 f.b.m. and

.... ▲

000 f.b.m. Annually........ ■

.... ⊕

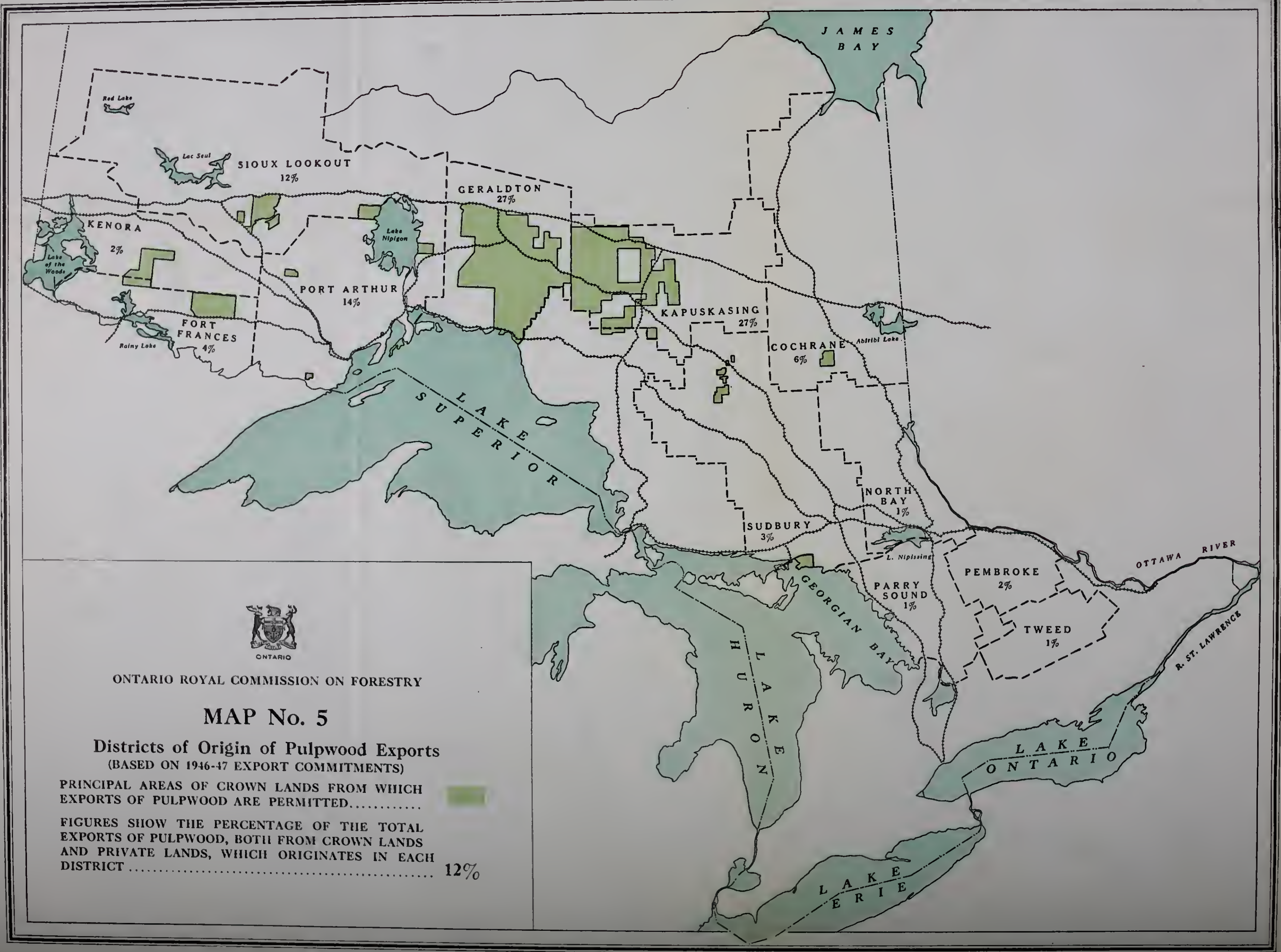
Miles
40 60 80 100

RY

STS

.. 🟥

.. 🟩


JAMES BAY
Red Lake
Lac Seul
SIOUX LOOKOUT 12%
GERALDTON 27%
KENORA 2%
Lake of the Woods
Lake Nipigon
PORT ARTHUR 14%
FORT FRANCES 4%
Rainy Lake
KAPUSKASING 27%
COCHRANE 6%
Abitibi Lake
LAKE SUPERIOR
NORTH BAY 1%
SUDBURY 3%
L. Nipissing
OTTAWA RIVER
PEMBROKE 2%
PARRY SOUND 1%
TWEED 1%
GEORGIAN BAY
LAKE HURON
R. ST. LAWRENCE
LAKE ONTARIO
LAKE ERIE

ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

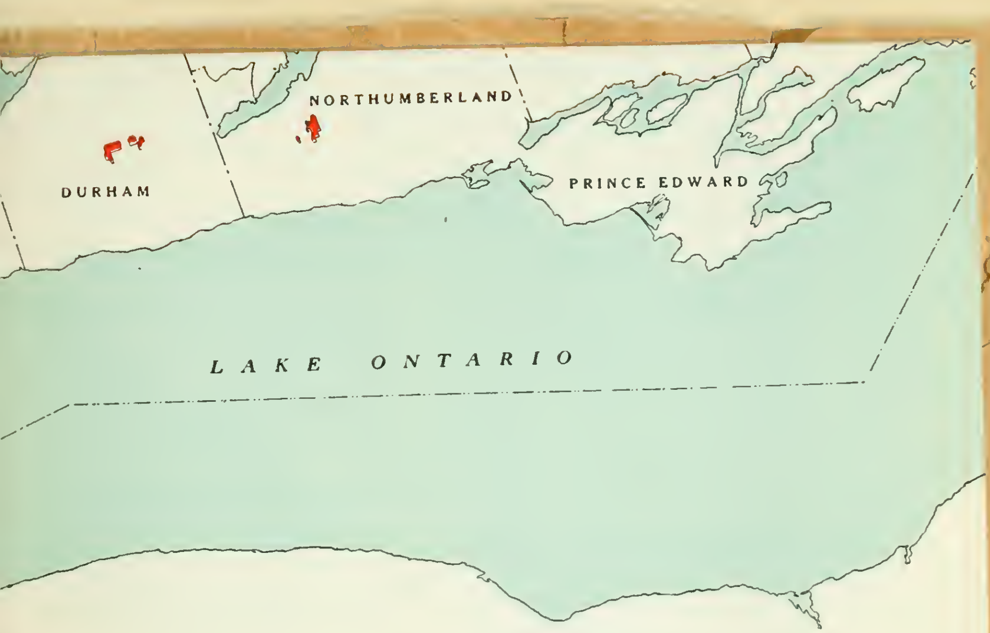
MAP No. 5

Districts of Origin of Pulpwood Exports

(BASED ON 1946-47 EXPORT COMMITMENTS)

PRINCIPAL AREAS OF CROWN LANDS FROM WHICH EXPORTS OF PULPWOOD ARE PERMITTED............ 🟩

FIGURES SHOW THE PERCENTAGE OF THE TOTAL EXPORTS OF PULPWOOD, BOTH FROM CROWN LANDS AND PRIVATE LANDS, WHICH ORIGINATES IN EACH DISTRICT 12%


NORTHUMBERLAND
DURHAM
PRINCE EDWARD
LAKE ONTARIO

ONTARIO

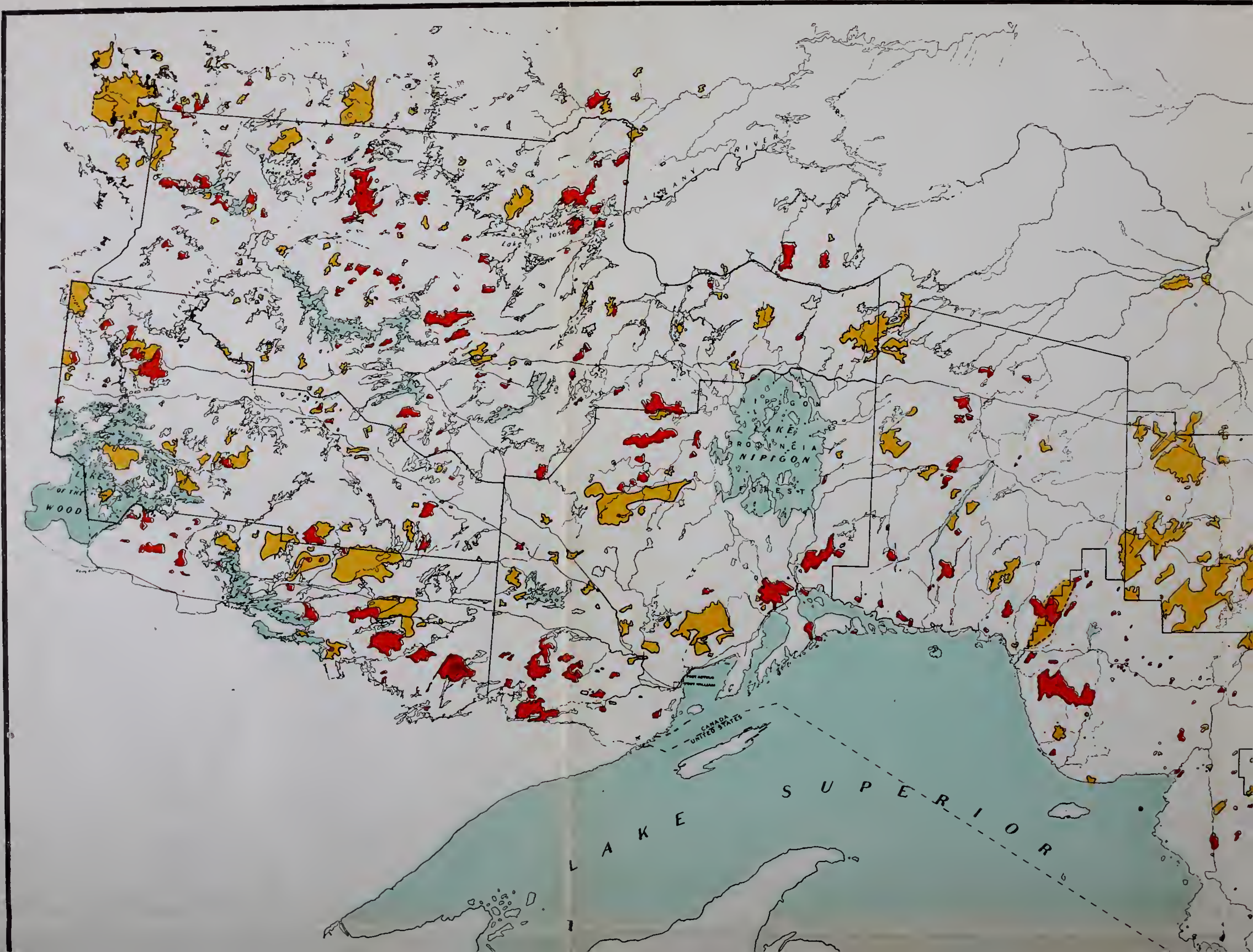
ONTARIO ROYAL COMMISSION ON FORESTRY

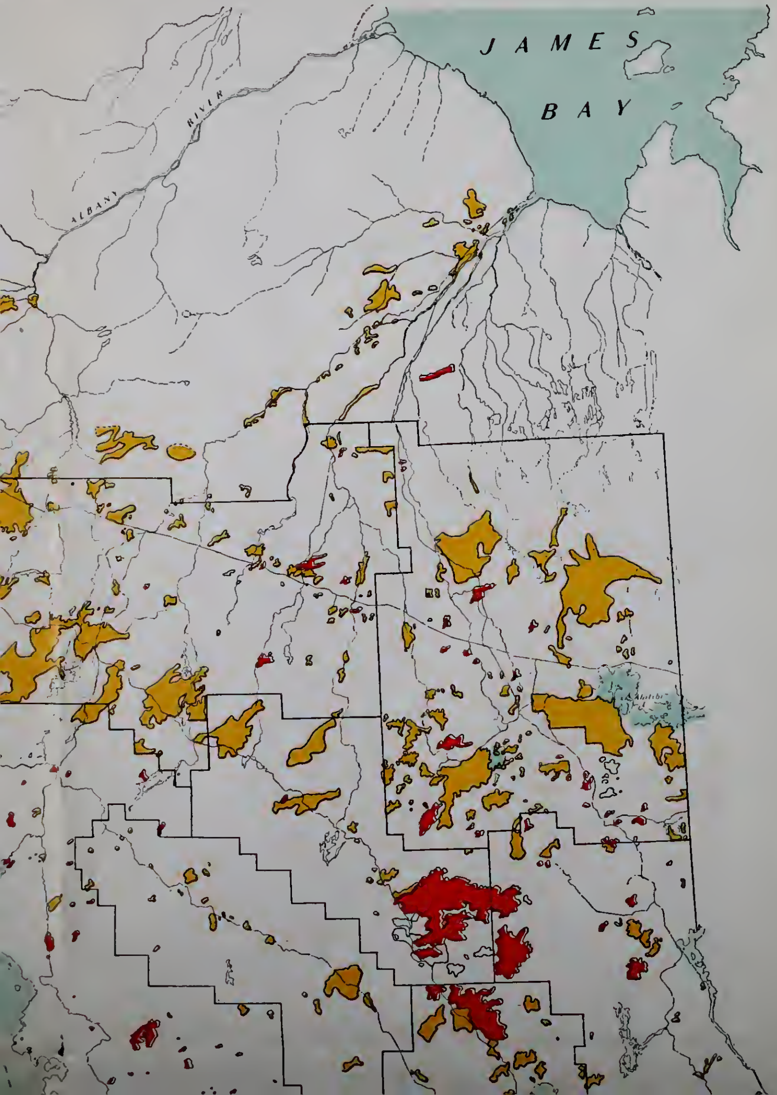
MAP No. 10

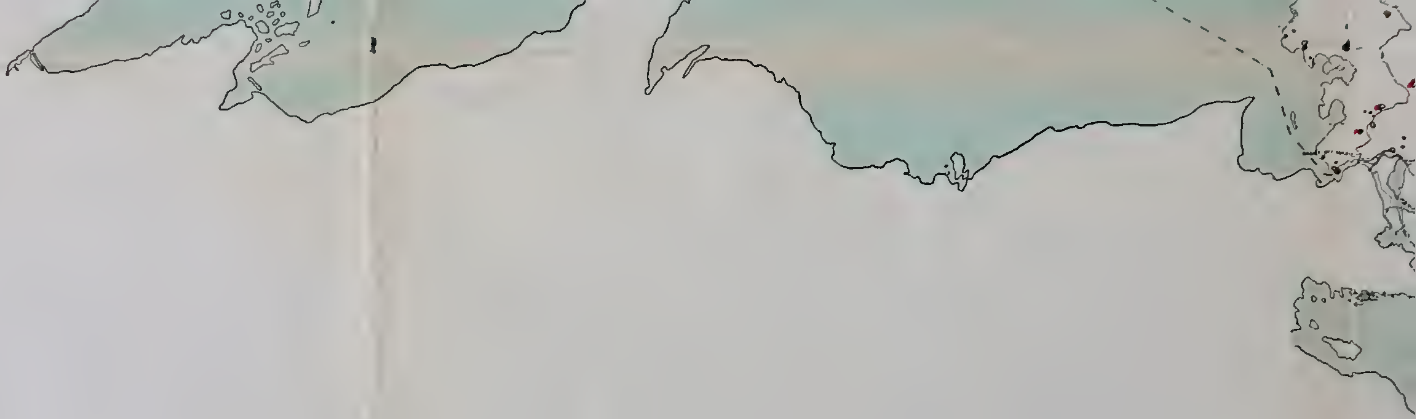
COUNTY AND MUNICIPAL FORESTS

Land under Municipal Reforestation Act............ 🟥

Land not under Municipal Reforestation Act........ 🟩


ALBANY RIVER
Lake St Joseph
LAKE NIPIGON
NIPIGON PROVINCIAL FOREST
LAKE OF THE WOOD
PORT ARTHUR
FORT WILLIAM
CANADA
UNITED STATES
LAKE SUPERIOR


JAMES BAY
ALBANY RIVER
L. Abitibi



ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

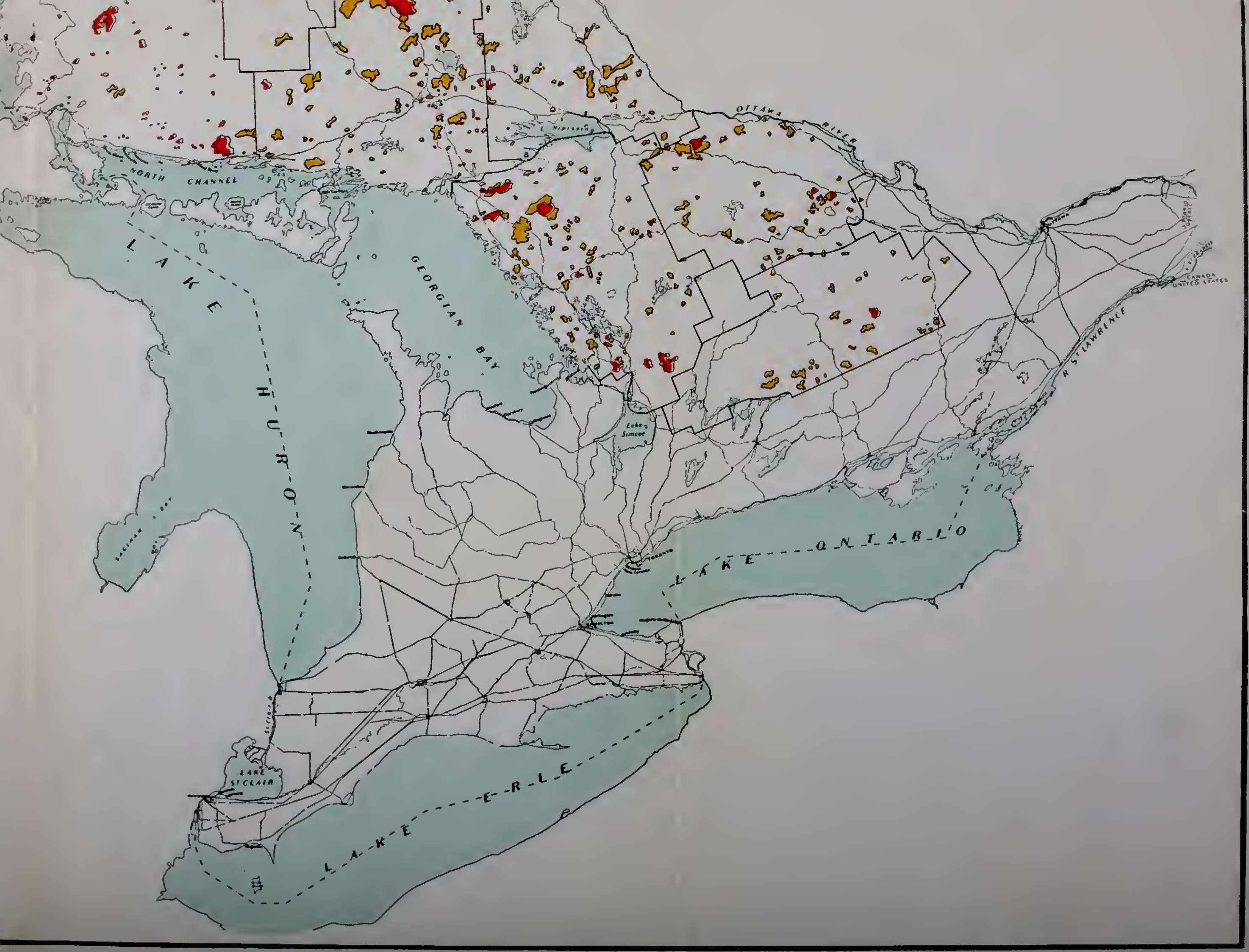
MAP No. 9

REPORTED BURNED AREAS OF OVER 500 ACRES

Burned-over between 1936 and 1946. . . .	🟥
Burned-over between 1920 and 1935. . . .	🟧

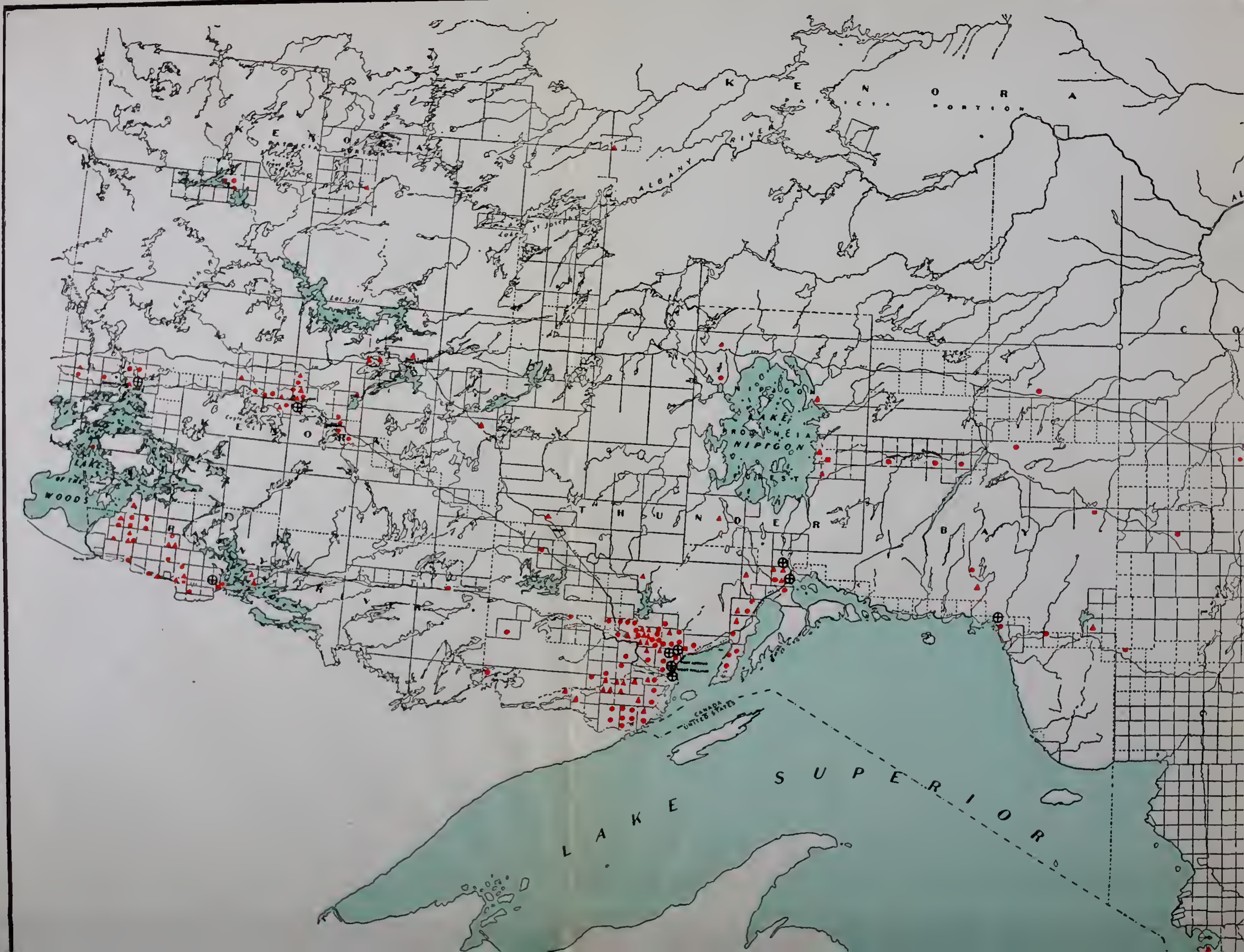
Miles

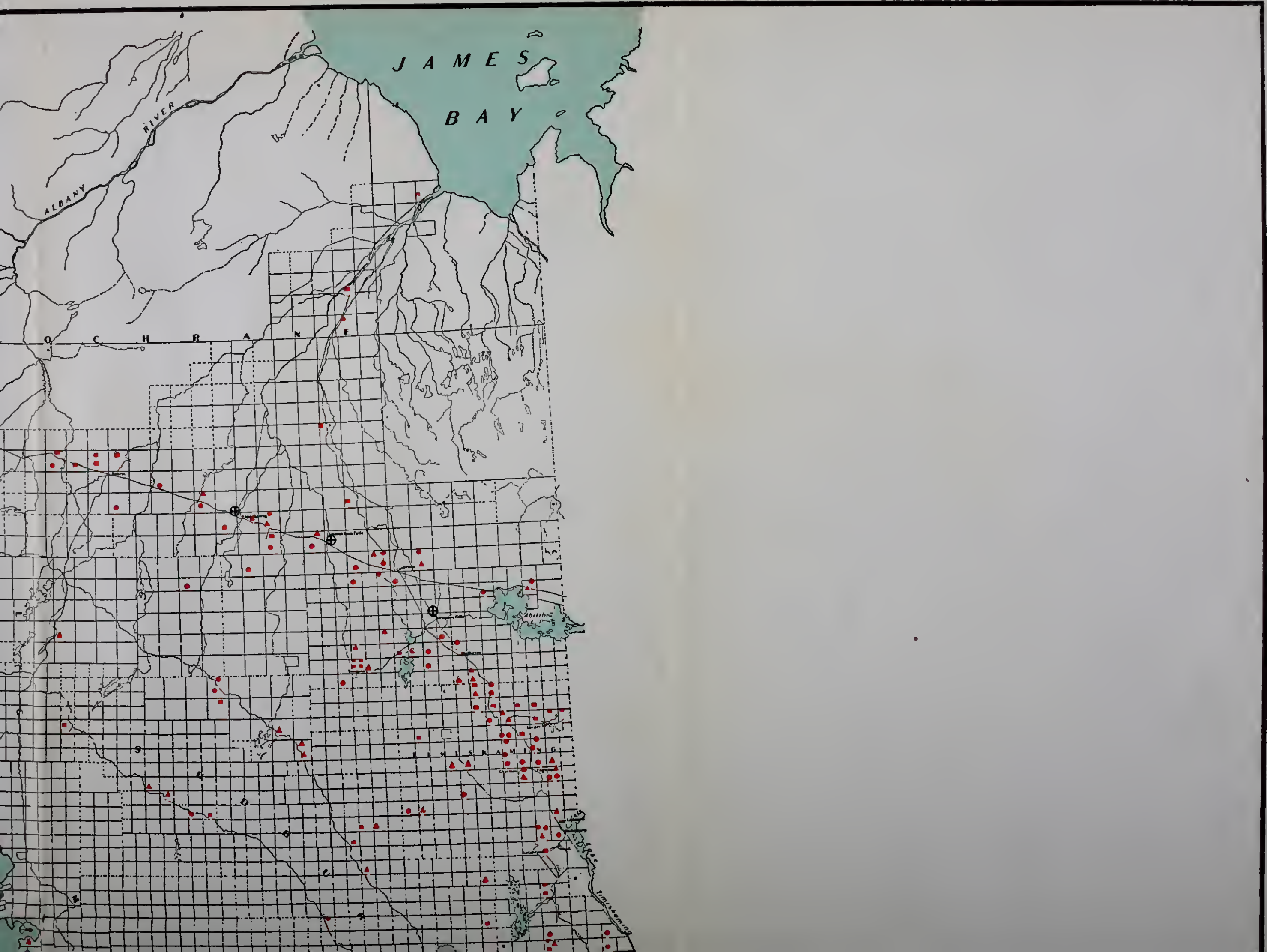
20 10 0 20 40 60 80 100


OTTAWA RIVER
L. Nipissing
NORTH CHANNEL
LAKE HURON
GEORGIAN BAY
SAGINAW BAY
Lake Simcoe
OTTAWA
R. ST LAWRENCE
CANADA
UNITED STATES
TORONTO
HAMILTON
LAKE ONTARIO
LAKE ST CLAIR
LAKE ERIE

D

B


K E N O R A
PATRICIA PORTION
ALBANY RIVER
KENORA
PATRICIA PORTION
Lake St Joseph
Lac Seul
LAKE OF THE WOODS
K E N O R A
R A I N Y R I V E R
LAKE NIPIGON
NIPIGON FOREST RESERVE
T H U N D E R B A Y
CANADA
UNITED STATES
L A K E S U P E R I O R


JAMES BAY
ALBANY RIVER
COCHRANE
Abitibi L.
TEMISKAMING
SUDBUR
Lake
Timiskaming

ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

MAP No. 11

LOCATIONS OF SAWMILLS AND PULP AND PAPER MILLS

Sawmills Cutting under 100,000 f.b.m. Annually......... ●

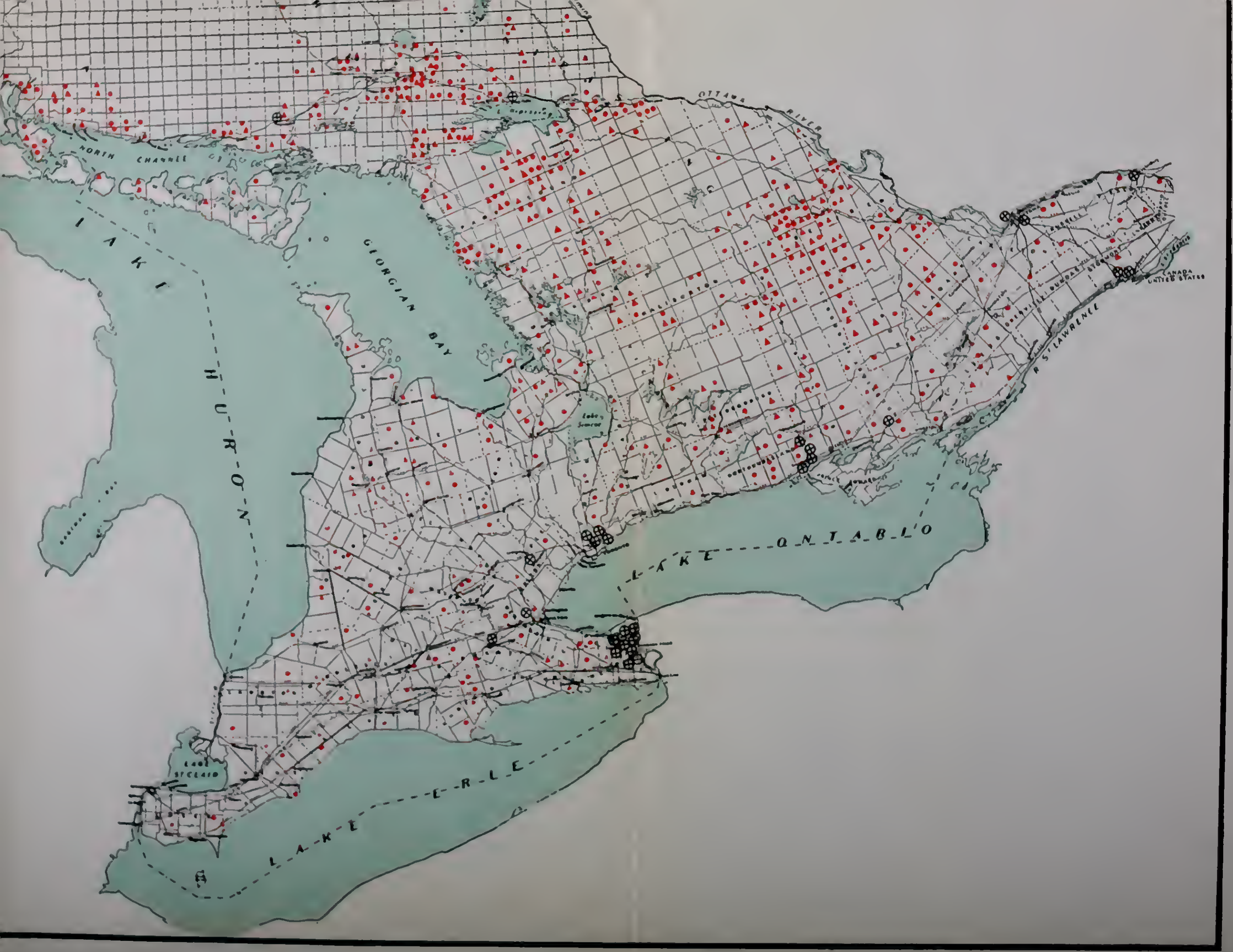
Sawmills Cutting between 100,000 f.b.m. and 1,000,000 f.b.m. Annually........................... ▲

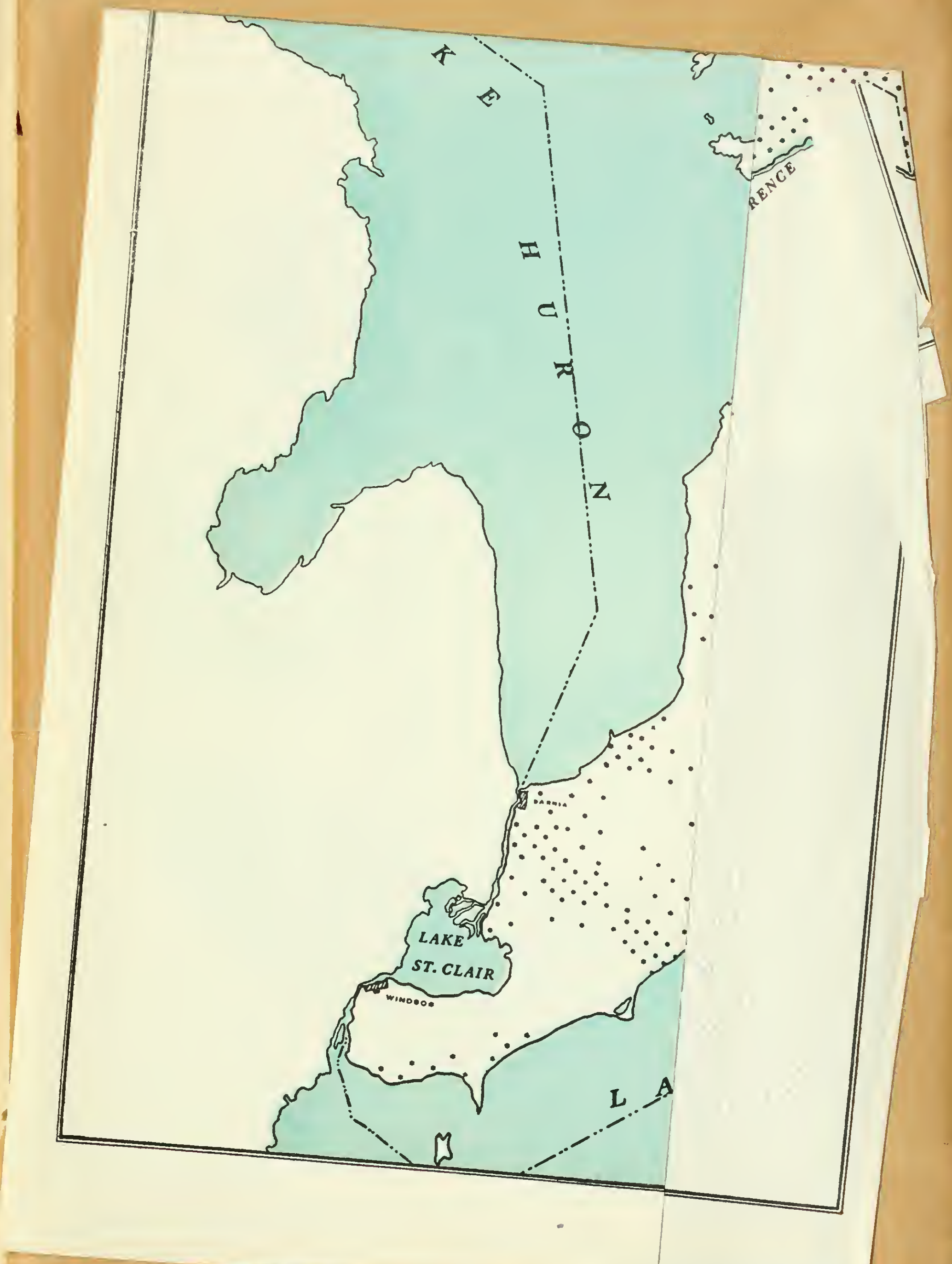
Sawmills Cutting over 1,000,000 f.b.m. Annually......... ■

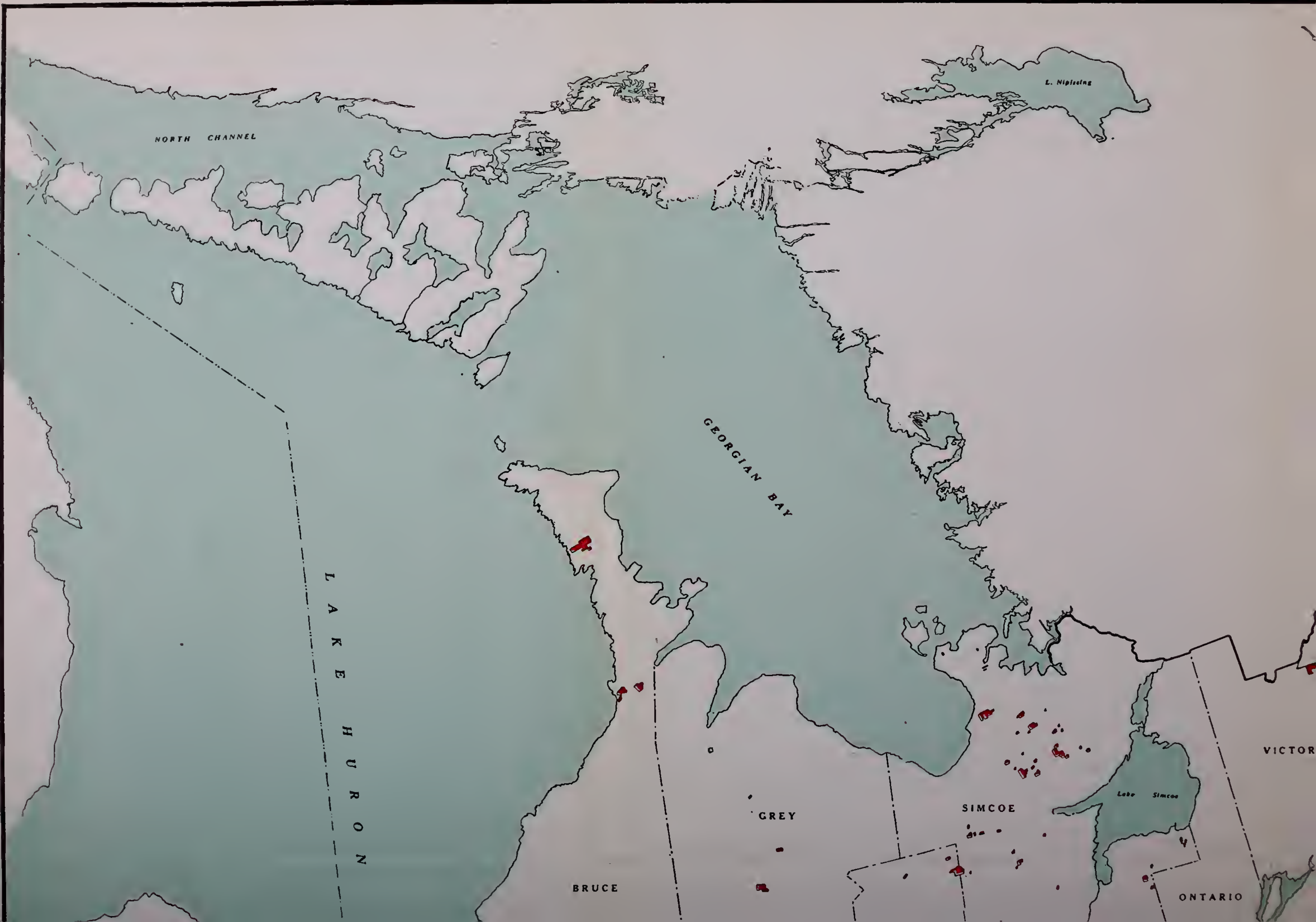
Pulp and Paper Mills................................... ⊕

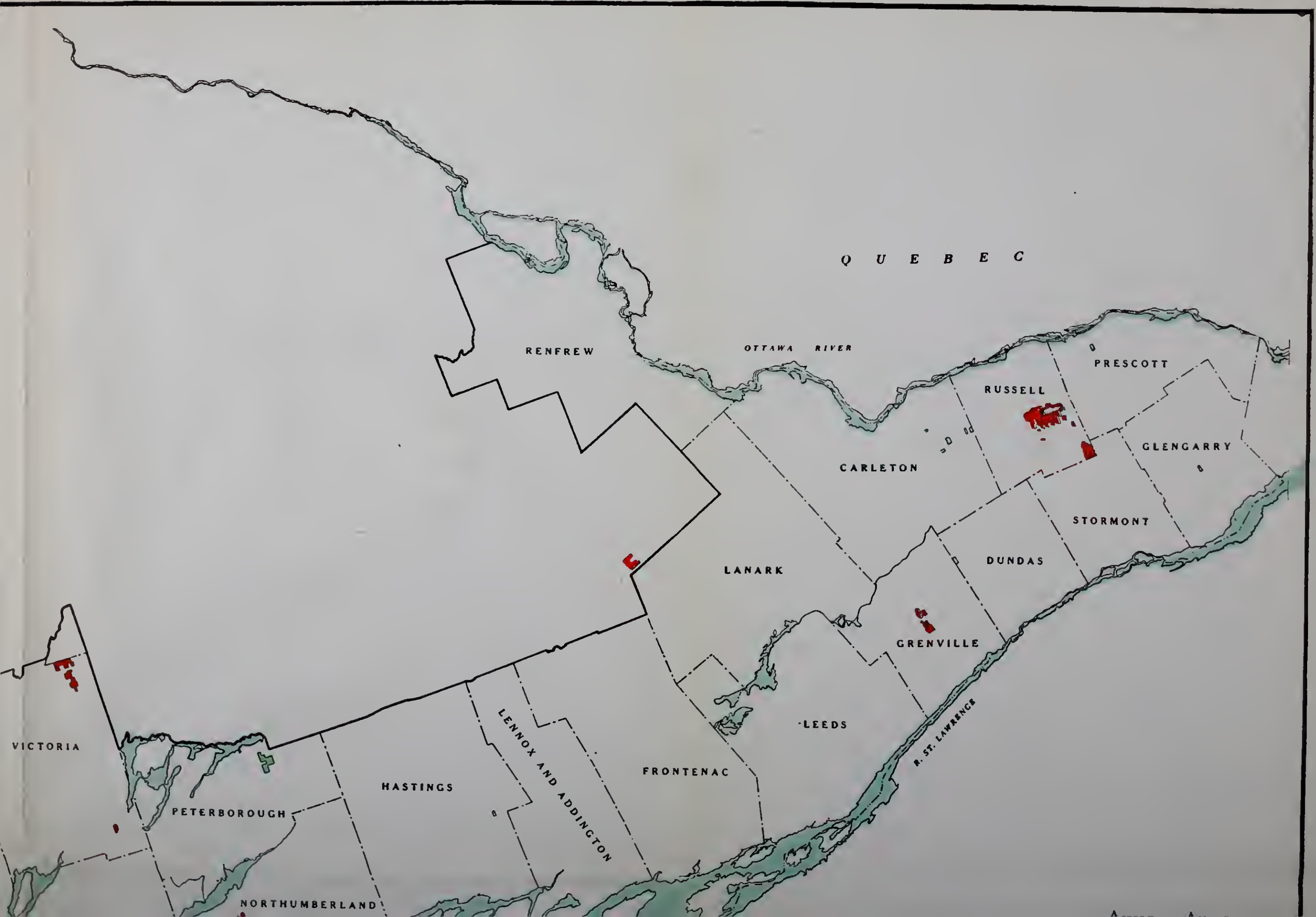
Miles

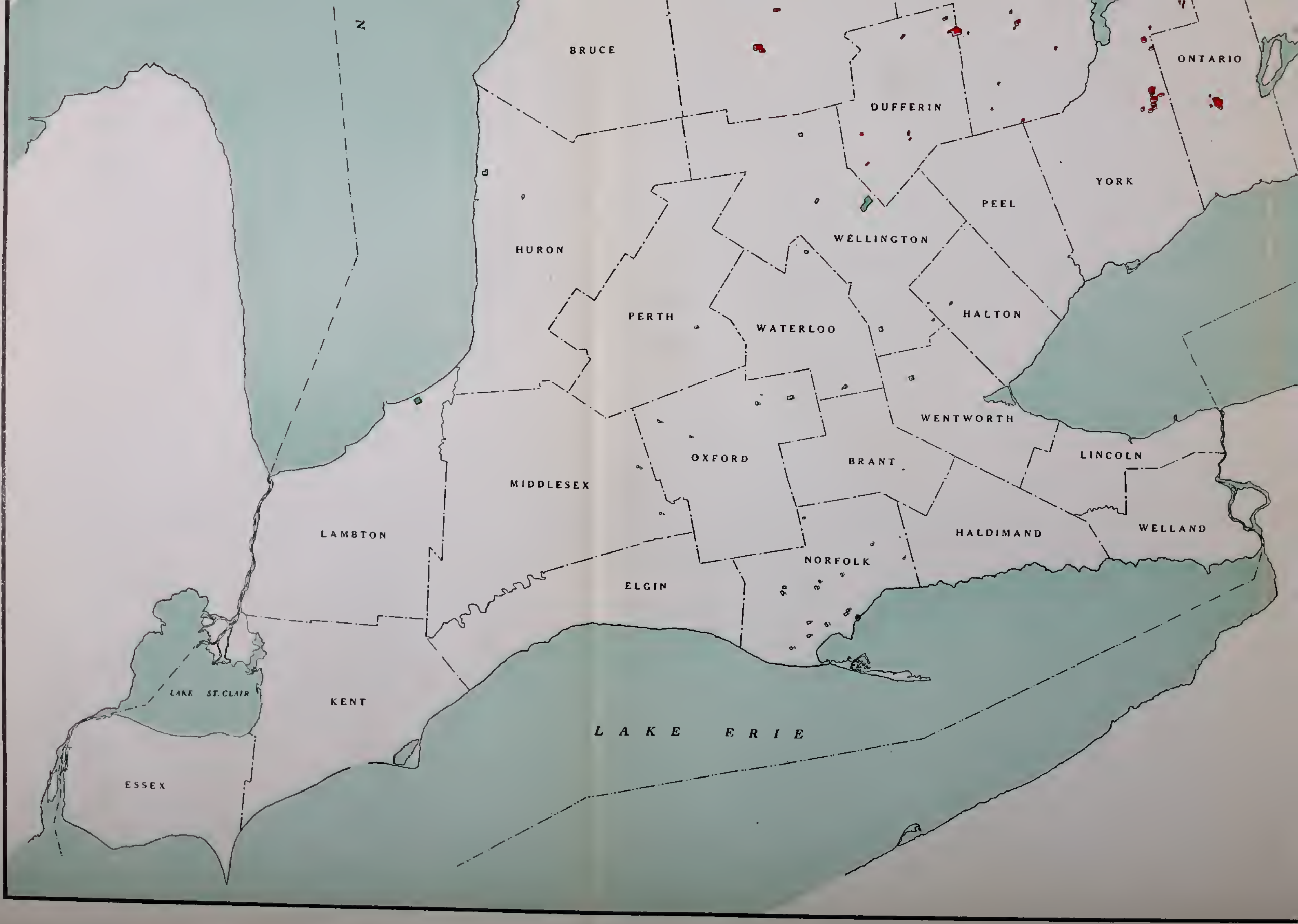
20 10 0 20 40 60 80 100

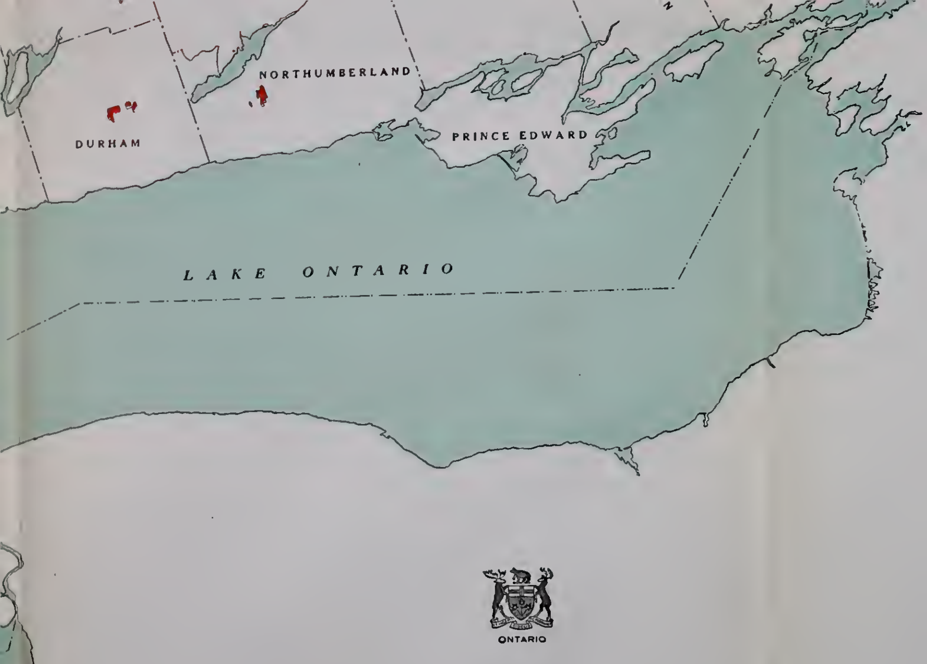

NORTH CHANNEL
LAKE HURON
GEORGIAN BAY
OTTAWA RIVER
Lake Simcoe
LAKE ONTARIO
LAKE ST CLAIR
LAKE ERIE
RUSSELL
DUNDAS
STORMONT
R. ST LAWRENCE
CANADA
UNITED STATES


KE HURON
LAKE
ST. CLAIR
SARNIA
WINDSOR
LA
RENCE


NORTH CHANNEL
L. Nipissing
GEORGIAN BAY
LAKE HURON
VICTOR
Lake Simcoe
GREY
SIMCOE
BRUCE
ONTARIO


QUEBEC
OTTAWA RIVER
RENFREW
PRESCOTT
RUSSELL
CARLETON
GLENGARRY
STORMONT
DUNDAS
LANARK
GRENVILLE
LEEDS
R. ST. LAWRENCE
FRONTENAC
LENNOX AND ADDINGTON
HASTINGS
VICTORIA
PETERBOROUGH
NORTHUMBERLAND


N
BRUCE
DUFFERIN
ONTARIO
YORK
PEEL
HURON
WELLINGTON
PERTH
HALTON
WATERLOO
WENTWORTH
OXFORD
BRANT
LINCOLN
MIDDLESEX
LAMBTON
HALDIMAND
WELLAND
NORFOLK
ELGIN
LAKE ST. CLAIR
KENT
LAKE ERIE
ESSEX



ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

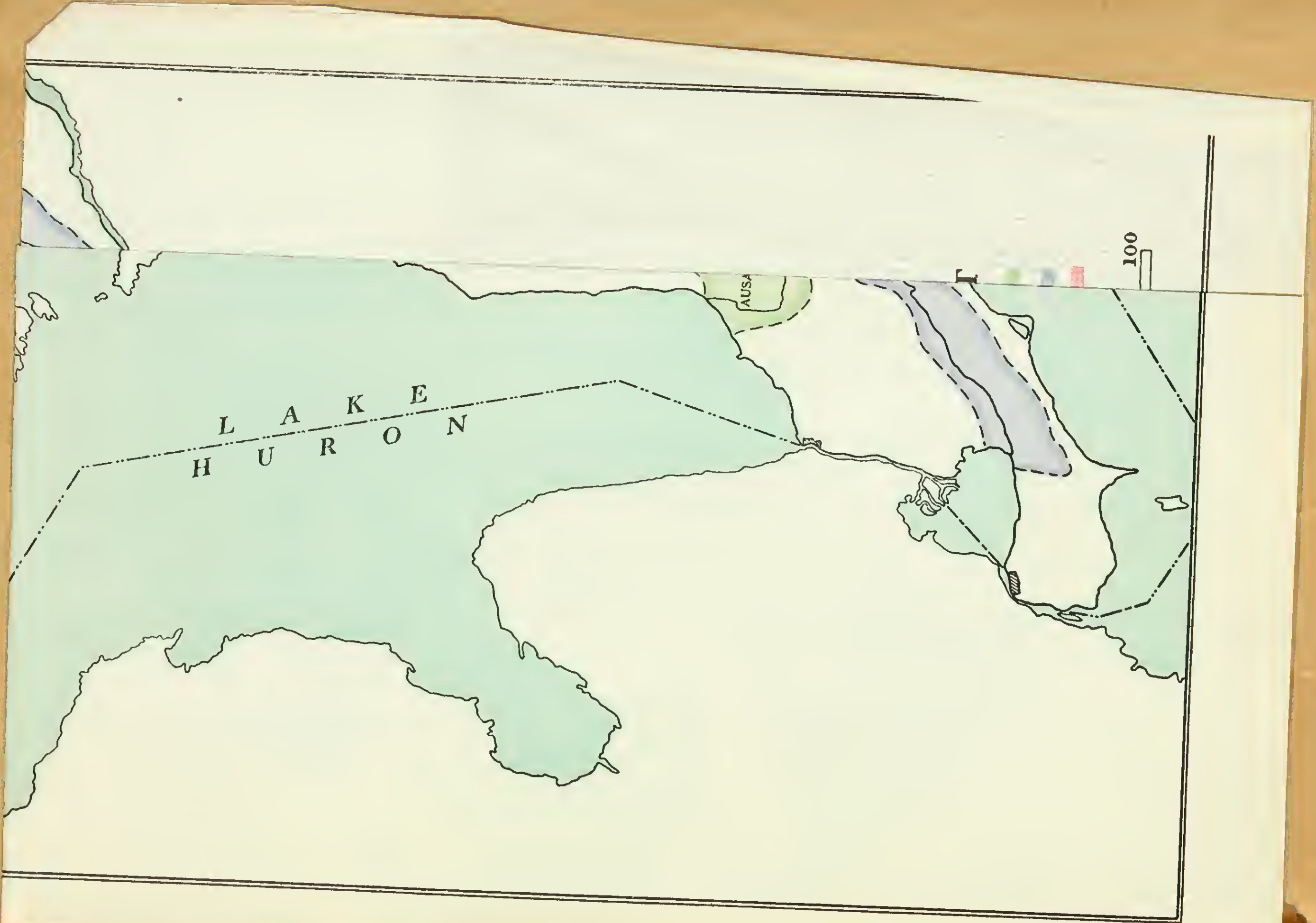
MAP No. 10

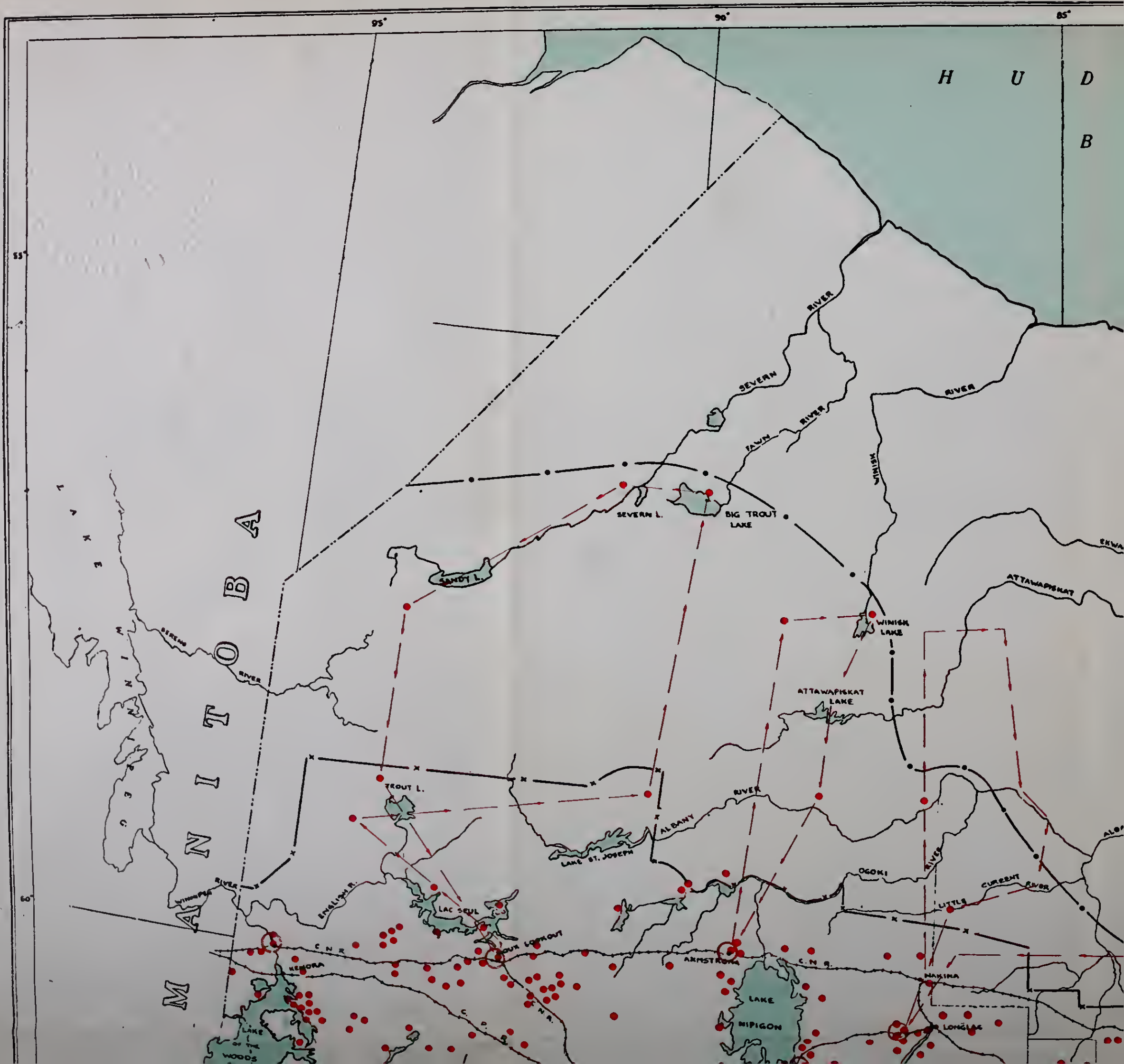
COUNTY AND MUNICIPAL FORESTS

Land under Municipal Reforestation Act	🟥
Land not under Municipal Reforestation Act	🟩

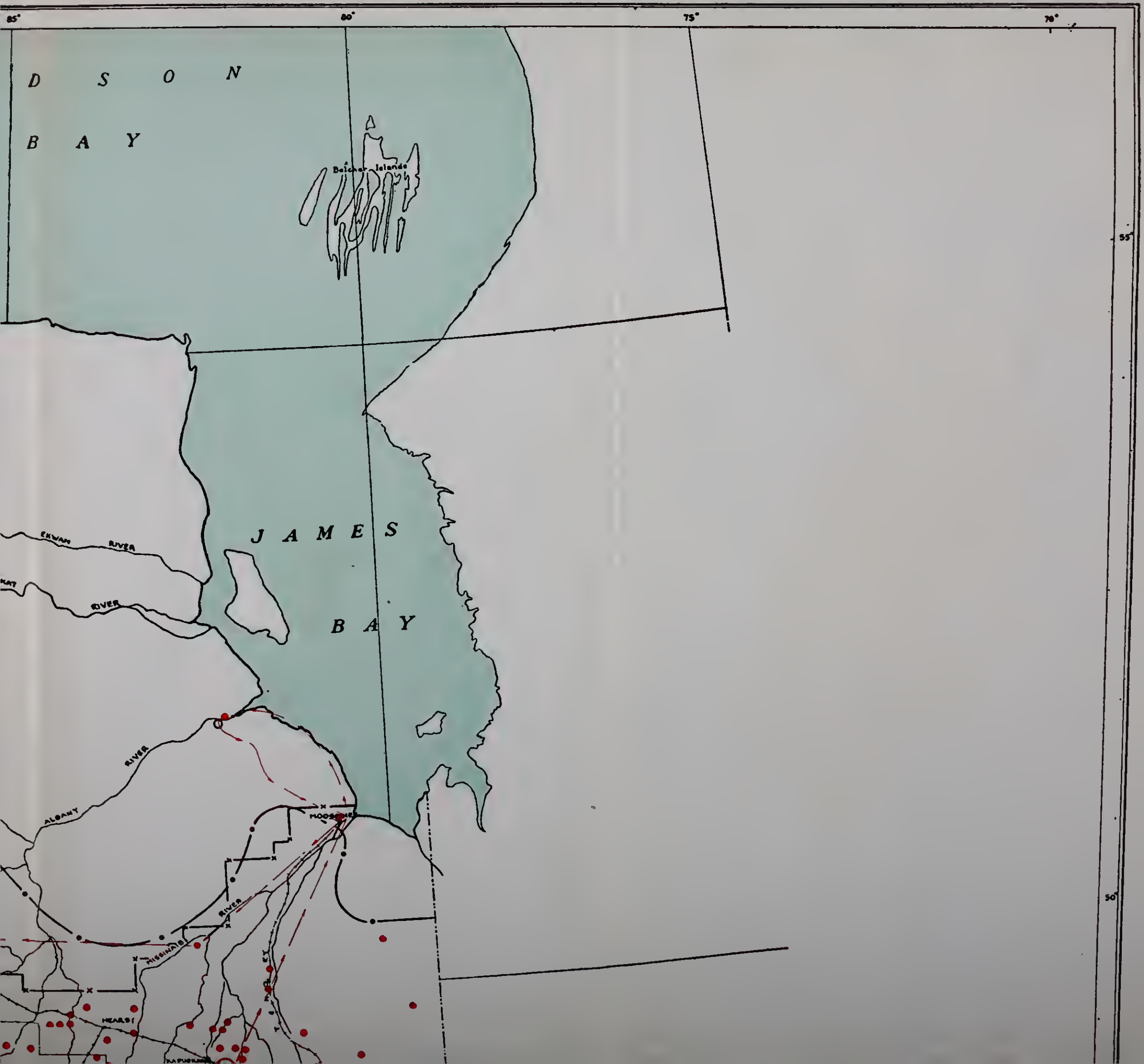
COUNTY	Acreage under the Act	Acreage not under the Act
Brant	....	59*
Bruce	5,245	90*
Carleton	....	700
Dufferin	1,440	235
Dundas	....	124
Durham	1,375	....
Elgin	175	90*
Essex	....	....
Frontenac	....	....
Glengarry	....	200
Grenville	1,550	4*
Grey	1,891	223
Haldimand	....	....
Halton	....	607
Hastings	....	177
Huron	....	483
Kent	....	20*
Lambton	....	700
Lanark	1,600	....
Leeds	....	3*
Lennox and Addington	....	12*
Lincoln	....	....
Middlesex	....	240
Norfolk	....	1,723
Northumberland	1,550	....
Ontario	1,075	50*
Oxford	....	590
Peel	....	65*
Perth	....	75*
Peterborough	....	3,000
Prescott	....	219
Prince Edward	....	....
Renfrew	....	....
Russell	11,000	....
Simcoe	9,375	410
Stormont	....	70*
Victoria	3,600	....
Waterloo	....	545
Welland	....	....
Wellington	....	1,759
Wentworth	....	436
York	2,622	65*
	42,498	12,974

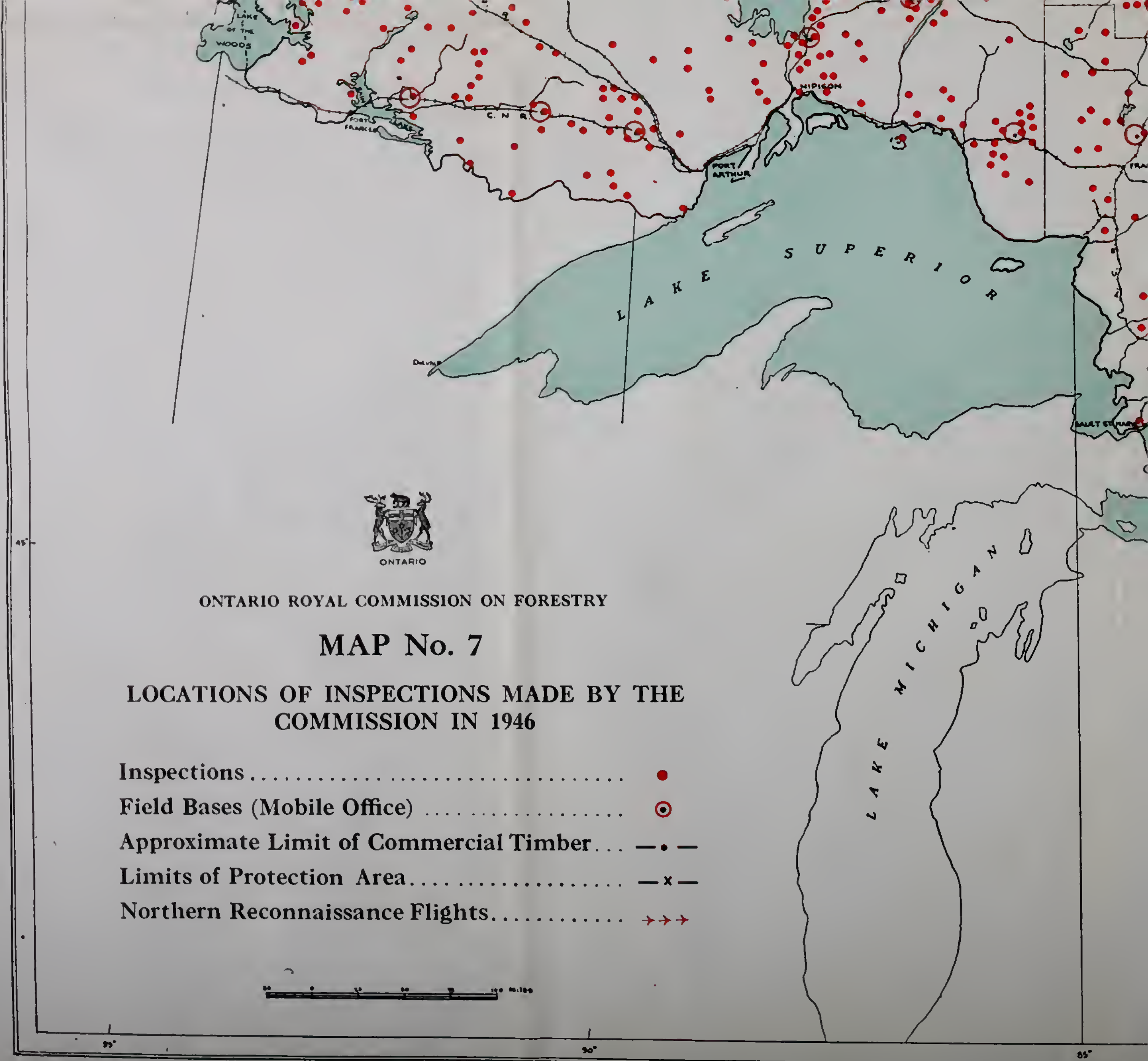
*Areas less than 100 acres not plotted.


LAKE HURON
100
AUSA



95°
90°
85°
H U D
B
55°
50°
LAKE WINNIPEG
BERENS RIVER
MANITOBA
SEVERN RIVER
FAWN RIVER
WINISK
RIVER
SEVERN L.
BIG TROUT LAKE
SANDY L.
EKWAN
ATTAWAPISKAT
WINISK LAKE
ATTAWAPISKAT LAKE
TROUT L.
ALBANY RIVER
LAKE ST. JOSEPH
ALBANY
OGOKI
RIVER
LITTLE CURRENT RIVER
WINNIPEG RIVER
ENGLISH R.
LAC SEUL
SIOUX LOOKOUT
C N R
KENORA
C. P. R.
C. N. R.
ARMSTRONG
C. N. R.
NAKINA
LONGLAC
LAKE NIPIGON
LAKE OF THE WOODS

85°
80°
75°
70°
55°
50°
DSON
BAY
Belcher Islands
JAMES
BAY
EKWAN RIVER
KAT
RIVER
ALBANY
RIVER
MOOSONEE
MISSINAIBI
RIVER
T & N.O. RY
HEARST
KAPUSKASING


LAKE OF THE WOODS
FORT FRANCES
RAINY LAKE
C. N. R.
NIPIGON
PORT ARTHUR
LAKE SUPERIOR
DULUTH
SAULT STE MARIE
LAKE MICHIGAN
45°
95°
90°
85°
25 0 25 50 75 100 Miles

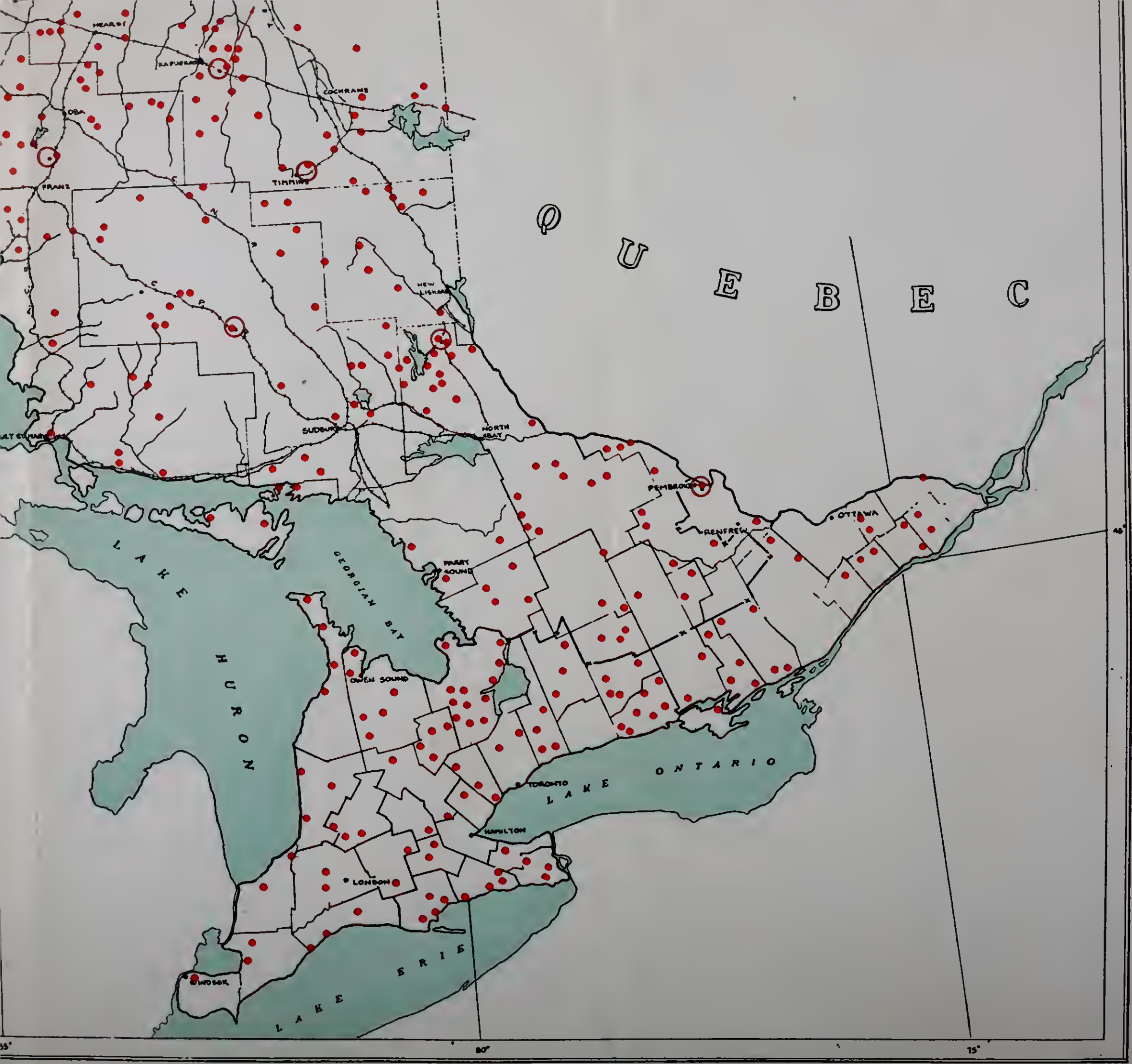
ONTARIO

ONTARIO ROYAL COMMISSION ON FORESTRY

MAP No. 7

LOCATIONS OF INSPECTIONS MADE BY THE COMMISSION IN 1946

Inspections .... ●
Field Bases (Mobile Office) .... ⊙
Approximate Limit of Commercial Timber ... —•—
Limits of Protection Area .... —x—
Northern Reconnaissance Flights .... →→→


HEARST
KAPUSKASING
COCHRANE
OBA
FRANZ
TIMMINS
QUEBEC
NEW LISKEARD
SUDBURY
NORTH BAY
SAULT STE MARIE
PEMBROKE
RENFREW
OTTAWA
45°
PARRY SOUND
GEORGIAN BAY
LAKE HURON
OWEN SOUND
TORONTO
LAKE ONTARIO
HAMILTON
LONDON
WINDSOR
LAKE ERIE
80°
75°

Ontario Royal Commission

on

Forestry

GLOSSARY OF TERMS

Used in 1947 Report

GLOSSARY OF TERMS USED IN REPORT

NOTE: This glossary is intended primarily for the layman and therefore strict scientific accuracy is sometimes subordinated to simplicity. It defines the various technical or semi-technical terms and uncommon words used in the report which are not in everyday use and which in many cases are not to be found in a standard dictionary. The definitions given cover only those meanings which are applicable to the terms defined in the sense in which they are used in this report. Terms which are self-explanatory or which are fully defined in the body of the report are not included.

Advance-reproduction (or **advance growth**). Young trees which have become established before cutting operations are begun.

Age-class. One of the intervals into which the range of ages of trees is divided for classification. Thus, a 60-80 year age-class means that the trees in that class range from 60 to 80 years of age.

All-aged. A term applied to a stand in which, theoretically, trees of all ages up to and including those of the maximum natural age of any species in the stand.

Allowance for trim. The permissible excess (by regulation not more than six inches) of the actual length of the sawlog over the recognized length it is deemed to be for the purpose of collection of stumpage. The recognized lengths rise by one-foot intervals from eight feet. Some allowance is necessary so that the lumber sawn from a log may be trimmed squarely and accurately to one of the accepted standard lengths with a minimum of waste.

Annual growth. The volume of wood on a given area added in one year by reason of the growth in height and diameter of the trees on the area. Also called the annual increment.

Ash (Fraxinus). Four species of this genus of deciduous tree occur in Ontario, of which black ash (**Fraxinus nigra**) is the only one occurring to any extent north of the portion of the Province known as Old Ontario. White ash (**Fraxinus americana**) is particularly useful in the manufacture of sporting goods and for other purposes where toughness is an important quality.

Balsam or balsam fir (Abies balsamea). A coniferous tree to be found growing in almost all parts of Canada except the extreme western areas. It is suitable chiefly for pulpwood and sawlogs.

Banksian pine. See **Pine.**

Berth (or **timber berth**). A block of publicly-owned forest land on which the right to cut timber is leased or granted.

Bid. That part of the stumpage rate paid for Crown-owned timber in Ontario which is set at the discretion of the successful bidder by public auction sale.

Birch (Betula). Three species of birch are native to Ontario. Of these yellow birch (**Betula lutea**) is the most valuable but has a more limited range, being found chiefly in Old Ontario, along the northern shore of Lake Huron, and in the Algoma district and to a lesser extent along the international border west of the Lakehead. It is a generally useful hardwood in demand for furniture, flooring, plywood, etc. White birch (**Betula papyrifera**) is found practically throughout the forests of Ontario. It is used to some extent for lumber and handles and other small woodenware. Grey birch (**Betula populifolia**) is commercially unimportant in Ontario and is found only in the eastern part of the Province.

Black Spruce (Picea mariana). See **Spruce.**

Blow-down. A tree, or a stand of trees, overthrown by the wind.

Blow-sand (area). Land consisting of light sandy soil subject to erosion by the wind. See also **Soil-drift.**

Bolt. A short log cut to a special length convenient for making barrel staves, shingles, spools, etc. The term may also be applied to individual pieces of pulpwood in short lengths. It is usually prefixed by the name of the article which is to be made from it, e.g., stave-bolt, shingle-bolt, etc.

Bonus. A premium payment in addition to a standard rate. Thus, in Ontario the term applies to that part of the stumpage rate paid for Crown-owned timber which is in excess of the standard basic rate (dues) but excludes the portion bid. It may be fixed by departmental action or by negotiation with the lessee. In New Brunswick the term applies to an annual payment for the retention of cutting rights on Crown lands in addition to the established "ground rent". Also a payment or subsidy paid to defray part of the cost of, or to encourage, a desirable practice or undertaking.

Boom. A series of logs or timbers fastened together end to end by chains or cables for the purpose of: (a) forming artificial channels in streams or rivers through which logs or pulpwood may be floated or "driven" with a greater measure of control, or (b) encircling a quantity of float-logs or pulpwood so that the whole mass can be held safely in storage or can be towed by boats. The individual components of a boom are called "boom timbers".

Borers. Types of forest insects which tunnel into the wood, or between the bark and the wood, of standing or felled timber.

Box shooks (or shook). Pieces of lumber cut to specified sizes and to be later made into boxes.

Browse. Leaves, twigs and shoots of trees and shrubs available as forage for animals.

Buck. An adult male deer.

Budworms. Types of insects which at one stage in their life-cycle feed on the leaf-buds of trees and the leaves themselves causing partial or complete defoliation and often the death of the trees so injured.

Bulldozer. Primarily, but by no means exclusively, a road-building machine consisting of a crawler-type tractor fitted with a dirt-moving blade which is mounted horizontally across the front and which can be raised or lowered mechanically. Hence, "bulldozing" is the act of using a bulldozer.

Burn. An area over which a forest fire has swept and on which a new forest is not yet established.

Butt. The base of a tree or a term used to describe a log containing that part of a tree. Also the lower end of a log in relation to its original position in the tree.

Carrying capacity. The greatest population of any kind of wild animal which a given area can sustain in food, shelter, health and relative safety. Also the measure of the ability of a stream or river to carry a drive.

Car stakes. Poles about three to six inches in diameter and nine to twelve feet long used to secure loads on open railway freight cars.

Cedar (Thuja occidentalis). An evergreen tree found growing chiefly on swampy land in all parts of Ontario except the extreme northern portion. Particularly useful for poles, posts, shingles, and other products calling for durability or lightness. Also a favorite winter browse for deer.

Check-scaling. In the measurement of timber, checking-scaling bears the same relationship to scaling, as in accounting practice, auditing bears to book-keeping. That is to say, it is a checking and testing of the original measurements and their compilation. See **Scaling.**

Chemical-pulp. Forms of woodpulp manufactured by treating wood chips with hot chemical solutions which dissolve some of the constituents of the wood and thus separate, and to a considerable degree change the qualities of, the individual wood fibres. Compare **Groundwood (pulp).** See **Soda-pulp, Sulphate-pulp** and **Sulphite-pulp.**

Clear-cutting. The removal of the entire stand of merchantable timber on a given area in a single operation.

Climate, continental. The type of climate characteristic of the interior of a continent. As compared with a maritime climate, a continental climate has a wide annual and daily range of temperature.

Climate, maritime. A type of climate characteristic of the ocean, oceanic islands, or coastal regions, its most prominent feature being equability of temperature.

Composition. The relative proportions in which various species of trees occur in a forest stand.

Conifer. A term applied to species of trees which bear their seed in cones. Conifers include the pines, the spruces, balsam, hemlock, cedar, and larch, the last-named being the only conifer native to Ontario which is not an evergreen.

Cord. A unit of measurement of stacked wood defined by federal Statute as the amount of wood which can be piled in a space containing 128 cubic feet, but presently used in Ontario to denote several different volumes. See pages 110, 164.

Crown cover. The canopy of leaves and branches formed by the crowns of all the trees in a forest stand.

Cull. To reject a tree, log, or piece of lumber in scaling or grading. Also a term applied to lumber of very low quality but still marketable. Also a tree or log rejected for use because of poor quality.

Culler. See **Scaler.**

Cut. A season's output of logs or the output of lumber from a sawmill in a given period. Hence an annual cut is the quantity of forest products cut on a given area in a year.

Cut-over. Descriptive of forest areas on which felling operations have recently been conducted, and on which there is usually left a quantity of tops, branches and other highly inflammable debris.

Cutting-cycle. The planned interval between major felling operations in the same stand, or the planned period in which all parts of a given forest area are cut over in orderly sequence.

Deciduous. Descriptive of all species of trees which shed all their leaves each autumn as distinct from evergreens which shed and renew their leaves progressively.

Forest policy. The principles and broad plans adopted by a government or the owner of timberland regarding the use, management, exploitation, and protection of the forest. In the case of governments, employment, industrial development, forest taxation, the exportation of forest products, land-use, reforestation, and many other matters enter into any comprehensive forest policy; in short all the many phases of forestry and forest economics which may have a bearing on the welfare of the community.

Fuelwood. This term usually applies to wood cut in the forest or woodlot and intended primarily as a domestic fuel for heating or cooking. It is sometimes applied also to wood refuse accumulated at sawmills which may be used as either domestic or industrial fuel.

Game sanctuary. An area in which hunting is prohibited for the specific purpose of providing a safe breeding ground for game.

Girdling. The removal of a portion of the bark of a tree completely encircling the trunk. The delicate growing tissue, called the cambium, is thus exposed or is removed along with the bark, and in either case the death of the tree follows. Porcupines and beaver often girdle trees while obtaining food and thus do considerable damage in the forest.

Grading. The art or science of classifying lumber, piece by piece, according to established standards of quality, or grades.

Ground rent. An annual rental charged forest operators by the Government for Crown timberlands leased to them. The current and maximum basic rate in Ontario is $5.00 per square mile per year, but in effect the rate varies with circumstances and according to terms of the agreement or license.

Groundwood. A type of woodpulp made by grinding bolts of wood under a stream of water on a revolving stone in such a way that the fibres of the wood are separated but remain chemically unchanged.

Growth ring. The ring visible on a stump or log which indicates the boundaries of one year's growth of the tree.

Habitat. The kind of place in which, or site on which, any specified animals, insects or plants live by preference and where conditions are suitable for their healthy development.

Hardwood. Generally, one of the botanical group of trees which have broad leaves in contrast to the needle-leaf trees, or conifers. Also the wood or lumber produced from such trees.

Hemlock (Tsuga canadensis). A conifer, found growing in that part of Ontario south of the Height of Land and west through the Algoma district, but less abundantly than in the past. Formerly cut in great quantities for the purpose of securing the bark which is used in the tanning of leather. Now used chiefly for construction lumber and crating, but also usable in limited proportions in the manufacture of pulp.

Hewn timber. A form of timber cut in the past (usually of white pine in Ontario) which was hewn out of the log in the forest by hand with the aid of a special (broad) axe. The timbers were usually square in cross-section and as large as the dimensions of the log would permit. Such timbers were called "square timbers".

Hickory (Carya). There are five species of hickory native to Ontario, but their range in the Province is confined to the southwestern counties, and even there they are becoming increasingly scarce. The wood of these species is heavy, hard, and very tough and is in great demand for many purposes particularly for handles for striking tools. Substantial quantities are imported annually from the United States.

High-grading. The practice of cutting a forest stand so that only the best wood, or that most cheaply or easily removed, is taken, the rest being left to deteriorate or die.

Humus. The layer of decaying vegetable and animal matter covering the soil itself which is usually to be found in the forest or woodlot. This may be destroyed by grazing cattle, or by forest fire, or by improper cutting practices. The destruction or removal of the humus is often followed by erosion.

Insecticide. Any chemical used to kill insects.

Inventory. In relation to forests an inventory is a survey to determine the area and condition of the forest stand, its volume and the species which compose it, and all other data required as a basis for sound policies and management and wise cutting programmes and methods.

Jack pine (Pinus Banksiana). See **Pine.**

Jobber. A contractor who carries on forest operations on behalf of the person or company owning or leasing the timberland. The extent of their individual operations may be small and one owner or lessee may employ several jobbers. In the case of Crown lands, the lessee is responsible to the government for the work done by a jobber in his employ.

Kraft. See **Sulphate pulp.**

Land classification. A system of classifying land according to the use to which it may best be put presently or in the future. Thus, in Ontario the major classifications might be farmland, forest land, and mining territory, though in addition there would be other primary classifications and many sub-classifications.

Larch (Larix laricina). Larch, or tamarac, is the only deciduous confier native to Ontario where it is found in swamps and lowlands of all the forested portions of the Province. The species is of little immediate commercial importance because no stands of it are more than forty of fifty years old. Early in this century all then existing stands were virtually wiped out by an insect epidemic, but the species is now re-establishing itself fairly satisfactorily. The timber is among the hardest and heaviest of the so-called softwoods in Canada, and it is noted for its durability.

Larva (plural larvae). The grub-like, worm-like or maggot-like stage in the life-cycle of certain moths, beetles, and other winged insects. It is during this stage that the greatest amount of feeding is done and hence the most damage.

Leader (shoot). The terminal shoot of the main stem of a tree, or the shoot that takes its place if the genuine leader is killed, at the tip of which all growth in the height of a tree takes place.

Length-class. One of the arbitrary standard lengths, usually of even feet, into which logs are classified for convenience. The interval between classes is usually one foot.

Lichens. A partnership of interdependent plants which grow on rock, bark, etc. One plant in the partnership is a fungus and the other an alga (both low forms of plant life) and each is essential to the life of the other. These plants are an important part of the diet of cariboo.

Life-cycle. The series of stages in the life, form, and way of living through which some plants and animals pass. For example, white pine blister rust cannot complete its life-cycle on the white pine tree, but must pass to gooseberry or currant bushes to complete one phase of it quite different in appearance and way of living from the form assumed on the white pine. Or again, the adult spruce-budworm moth lays eggs which hatch into larvae which in turn pass through five stages of life before entering the pupa, or chrysalis, phase. From the pupae adult moths emerge thus completing the insects' life-cycle.

Lifter. A special piece of equipment for lifting seedlings or transplants from beds in a forest nursery.

Lignin. A compound chemically related to cellulose and with cellulose forming the essential part of wood substance. Lignin forms the adhesive bond which holds the individual wood fibres together, and this substance is removed from the wood in chemical methods of manufacturing woodpulp. The lignin made available as a by-product in the making of pulp can be used in the manufacture of adhesives, plastics and other products.

Limit. A tract of timberland owned by a "limit owner" or leased by a "limit holder" from the Crown for the purpose of conducting a forest industry.

Lodge. The partially submerged dwelling place of a family of beaver, built of sticks and mud.

Log-deck. The platform in a sawmill upon which logs are held in readiness to be sawn.

Log-rule. Any mathematical, graphical, or tabular system by which the contents of a sawlog may be estimated in terms of feet board measure of the lumber which it may yield. There are a great many different log-rules, but a few of them, such as the Doyle log-rule, are grossly inaccurate.

Log-scale. See **Log-rule.**

Lookout tower. A steel or wooden tower surmounted by a cabin or platform, commanding a wide view of the surrounding forest, and from which any forest fires occurring in the region may be observed. The observer is in communication by telephone or radio, or both, with the fire-fighting service and can report the compass bearing and approximate distance of the fire from the tower. Compass bearings on the same fire from two or more towers fix its location accurately. A compass bearing and the approximate distance from one tower will enable an air-borne observer to find, and accurately fix the location of, a fire.

Lumber. To engage in forest operations. Also boards, planks, etc., sawn from logs. "Rough lumber" is lumber which has not been planed or dressed.

M. Thousand. Thus 200,000 M. f.b.m. means two hundred million feet board measure.

Maple (Acer). There are seven species of maple native to Ontario most of them confined to that part of the Province south of the latitude of Timmins and Port Arthur. By far the most important species is sugar or hard maple (**Acer saccharum**) which, besides being the source of maple syrup and maple sugar, is in great demand for lumber for furniture, flooring, and a great many other products. It is also a prized fuel. "Soft maple" is a name given to either silver maple (**Acer saccharinum**) or red maple (**Acer rubrum**) which are often found growing on wet ground of poor fertility and which have little commercial value except as fuel.

Marginal. Of lands or soils that which produce or can produce a crop which, when sold at existing market prices, will barely return the cost of production. Also of any undertaking the cost of which is as great as, or nearly as great as, the return it brings.

Marks (timber). Marks painted, hammered, or chopped on logs to identify ownership; similar to a trade mark. Hence "timber marking" is the process of marking logs with one's own peculiar brand or mark.

Mattock. An implement for digging or grubbing, not unlike a pick in general appearance, particularly useful in fighting forest fires.

Maturity-age. The age at which a given species or stand of timber becomes ripe for cutting. Before maturity-age the timber is not fully developed either from the physical or economic standpoint, while after reaching maturity-age it is likely to deteriorate or at best does not increase in value. Different kinds of trees or stands have different maturity-ages.

Measuring-worm. A particular genus of caterpillar which has a looping motion when crawling. Several species are serious defoliators of conifers and hardwoods.

Merchantable. A term used to describe logs or lumber of such size and quality as to be acceptable on the open market at current normal prices.

Mixed stands (or **mixedwood stands**). Sometimes this term refers to stands of timber composed of several conifer **or** several hardwood species, but it is more generally applied to stands composed of a mixture of both hardwoods and conifers, and is so used in this report.

Moraine. The deposit of gravel, sand, or boulders left by a melting glacier. Glaciers covered a large part of what is now Ontario during the Ice Age.

Multiple-use operation. A forest operation in which a number of different products, such as pulpwood, sawlogs, poles, veneer-logs, and fuelwood, are extracted simultaneously according to the ability of the stand to yield these products and the capacity of the market to absorb them, each tree cut being converted into that product for which it is best suited. This is a practice very rarely followed at present in Ontario. Compare **Single-purpose operation.**

Natural forest. A forest **not** grown from seeds or seedlings planted by man.

Natural reproduction. Seedlings or young trees grown from seeds from neighbouring trees. That is to say, natural reproduction is the way in which a natural forest perpetuates itself. Compare **Plantation.**

Newsprint. The type of paper on which newspapers are usually printed. It consists of roughly four or five parts of groundwood pulp to one part of sulphite pulp. In volume and total value (but not in unit value) newsprint is by far the most important product of the paper industry of Ontario. The manufacture of other types of paper gives more employment and brings higher returns per ton of output.

Oak (Quercus). There are about eight species of oak native to Ontario and all grow most commonly, but not too abundantly, in Old Ontario. Scattered red oak (**Quercus borealis**) and bur oak (**Quercus macrocarpa**) are to be found as far north as the Height of Land; while white oak (**Quercus alba**) grows sparsely in the Algonquin Muskoka regions. Oak is strong, hard, tough and durable and is one of the most valuable of Ontario trees. It is in great demand for furniture (chiefly white oak), flooring, vehicle and farm implement construction, interior trim, and a host of other purposes. The supply of good oak is dwindling in Ontario and much is imported from the United States every year.

Operation. The whole sequence of activities involved in getting timber to the mill or loading point, including felling, bucking, skidding, hauling, and driving as well as the preliminary activities such as the construction of roads, camps, dams, or other structures necessary to facilitate the extraction of timber.

Operating plan. A plan setting out the details of an imminent operation, as distinct from a **working plan** which deals with the long-term exploitation of a forest area. An operating plan includes information on the volume of timber to be cut, the type of product to be taken, the area on which the operation will be conducted, the number of men to be employed, improvements and facilities to be constructed and other pertinent data of like nature.

Outfitter. One who makes a business of supplying hunters, anglers and tourists with the equipment necessary in their chosen form of recreation and who often organizes and conducts fishing and hunting parties.

Overcut. To cut a greater volume of timber on a given area than is replaced by new growth on the entire limit of which the cut-over area is part, or to cut a quantity of timber on an area in excess of what is indicated as proper according to good forestry practice.

Over-length tolerance. The same as **Allowance for trim** in the case of sawlogs, but in Ontario, in the case of unbarked pulpwood, an over-length tolerance of two inches in four feet is allowed to compensate for the smaller amount of wood in a cord of unbarked wood than in a cord of peeled wood. The stumpage rate per "cord" is the same in both cases, however.

Over-mature. Descriptive of a tree or stand which has passed beyond its prime and is deteriorating. Over-mature stands are apt to be unhealthy and susceptible to attack by insects or disease and are thus a menace to nearby younger stands. Over-mature stands should be cut to make room for young vigorous ones, otherwise an economic loss is sustained.

Overrun. The amount by which actual production exceeds the estimated production. With reference to log-rules it means the excess of the quantity of lumber produced from a given lot of logs over the total arrived at by scaling the logs according to any given log-rule. Thus, to say the Doyle rule gives a large overrun on small logs means that the actual production of lumber from small logs is much greater than the application of the Doyle rule to their measurement indicates.

Overscale. Descriptive of a log-rule which **overestimates** the quantity of lumber a given log, or group of logs, will yield. That is to say, the opposite of what the Doyle rule does.

Parasite. A plant (generally a fungus) or animal (generally an insect) which lives in or on another plant or animal from which it draws its nourishment but gives nothing in return. Thus white pine blister-rust and rot-causing fungi are parasites of the trees in which they live, while lice are parasites of the animals they infest. In entomological work, in particular, man makes use of parasites on a large scale to help destroy insect pests.

Pier. In forest operations a pier is a timber cribwork built in the water or along the bank of a stream and filled with rock to keep it in place. A pier may serve as a mooring to which booms may be fastened, or may be used along a river to guide logs through stretches of rough water between rocky banks where the timber might otherwise become jammed.

Pitch. A gummy substance occurring in the wood of certain trees, generally conifers, of which the pines are good examples. An excessive proportion of pitch in a wood renders it unfit for making some types of woodpulp. Pine and other pitchy woods can satisfactorily be used in making sulphate pulp.

Pile bottom. Round timbers specially cut and placed on the ground to form a firm and reasonably level foundation on which to pile logs or bolts in the woods.

Piling. Round timbers in long lengths similar to telephone or telegraph poles, but used to drive into the soil to provide a secure foundation for structures built on soft, wet, or submerged ground.

Pine (Pinus). Four species of pine are native to Ontario of which three are of great commercial importance and one of virtually none. White pine (**Pinus strobus**) is the species on which the great lumbering industry of Ontario was founded, but the fine virgin stands of it are now practically all gone and cannot be restored in their former greatness for generations. Second-growth white pine will continue to be an important, but perhaps not dominant, wood in our lumber industry. White pine grows in all parts of the Province south of the Height of Land, but reaches its best development in the Ottawa Valley, the Georgian Bay region, and, to a lesser extent, in the Rainy River area. Good-quality white pine lumber is one of the most highly prized softwoods in the world. Its uses as lumber are legion, but it is not used for pulp partly because it is suitable only for the sulphate process but more particularly because its value is greater for other purposes. Red pine (**Pinus resinosa**) is another important species for making lumber although the best stands of it, too, have all but gone. Red pine grows over practically the same range as does white pine, and the two species often grow side by side in the forest, though red pine tends to grow in pure stands more than does white pine. There is always a good demand for red pine lumber for construction work and general carpentry purposes, and this species also makes excellent poles and piling. Jack pine or Banksian pine (**Pinus banksiana**) is the most widespread of Ontario pines being found in practically all forested areas of the Province north of the Muskoka region. It makes a fine general-purpose lumber and is sought after for poles, piling and ties.

It is excellent for use in the manufacture of sulphate pulp and can also be used in limited proportions in other kinds of woodpulp. In short, although this species was neglected in the past, its all-round usefulness and its ubiquity will make it an increasingly important timber as white pine and red pine diminish in significance, which they are bound to do for a time at least.

Plantation. An artificially created forest established by planting seedlings or, more rarely, by sowing seed. Plantations are relatively expensive to establish and are usually resorted to only when natural methods of establishing a forest fail or cannot be used.

Plywood. Panels constructed of an odd number of thin layers of wood (veneer) glued together in such a way that the grain of the wood in adjacent plies is at right angles. It is widely used in house construction, furniture manufacture, and for a great many other purposes. In Ontario, yellow birch is the wood most commonly used for making plywood, but it is probable that other species will be used for this purpose in increasing quantities. Poplar, maple, white birch, red pine, white pine, oak, and several other species lend themselves to this use. See **Veneer-log.**

Pole. Round timber in long lengths usually used to support power lines or telephone or telegraph wires. In Ontario, red pine and jack pine are used extensively, though cedar is a favorite wood when it can be secured in suitable quality but cedar of the desired type is becoming scarce. Poles must meet quite rigid standards of size and quality and are almost invariably given a chemical treatment to render them more resistant to decay. See **Treating.**

Poplar (Populus). There are four species of poplar native to Ontario. Two of them—aspen (**Populus tremuloides**) and balsam poplar (**Populus tacamahacca**)—occur in all the forested parts of the Province while the others—large-toothed aspen (**Populus grandidentata**) and the sparser cottonwood (**Populus deltoides**)—do not occur north of the Height of Land. The poplars are rather neglected species which should, and probably will, command more attention in the future. Poplar is used extensively in the manufacture of soda pulp, and is used to a lesser extent in making other types of woodpulp though its possibilities in this direction are not yet fully exploited. Selected poplar is in strong demand for making matches. The species will also yield good general-purpose lumber, crating material, excelsior, and many other products. Poplar is very prolific in Ontario.

Portable mill. This term refers to sawmills of a type which can be moved from place to place with relatively little trouble or expense. At present they tend to produce rather poorly manufactured lumber, but this could be overcome by improvements in design and maintenance and by the instruction of their operators. Their worst feature is that, under existing conditions, they are notoriously wasteful of raw material.

Power pump. A gasoline-driven pump. Several types are especially designed for use in fighting forest fires and usually these are so light and easily handled that they can be carried by one or, at most, two men. They are invaluable weapons to the fire fighter.

Precipitation. Chiefly rain and snow but, strictly speaking, moisture in any form deposited from the atmosphere, such as dew, hail or hoarfrost.

Predator. An animal which preys upon and devours other animals. Thus birds, certain small mammals, frogs and toads, and even fish, are predators of insects.

Pulp. See **Woodpulp** and **Pulpwood.**

Pulpwood. Round wood cut for the specific purpose of being made into woodpulp. It is usually cut in lengths of approximately four feet or eight feet in the woods, but occasionally it is transported in longer lengths and cut up at the mills. Pieces of pulpwood do not need to be of large diamter, in fact it is usually better that they be fairly small, but unfortunately large trees more suitable for sawlogs or poles are often cut for pulpwood. Spruce is by far the most popular species for making woodpulp, but balsam, jack pine, poplar birch, hemlock, and other species can, and should, be used more than they are. Pulpwood is often, though incorrectly, referred to as pulp.

Ranger. A junior-grade employee of the Department of Lands and Forests whose duties are chiefly in the field and relate to fire prevention, fire suppression, fish and game protection, maintenance of telephone lines, inspection work, and sometimes scaling. A Chief Ranger is the senior representative of the Department in his area, or "Ranger Division". He is responsible directly to the District Forester and is in charge of all Rangers in his area.

Rate of growth (per acre). The speed at which the volume of wood in a stand of timber increases as the trees grow, usually stated in terms of cubic feet per acre per year. It is influenced by the species, the site, the climate, the soil, the cutting methods practised, and other factors.

Rear. See **Sweep.**

Red-heart. A type of rot, often not of a very detrimental nature in its early stages, which causes the heartwood, or central core of a tree, to turn reddish brown in color. All such rots are caused by fungus growth.

Red pine. See **Pine.**

Reforestation. The artificial restocking of an area with forest trees, usually with transplants but occasionally by the sowing of seed.

Refuse burner. An incinerator, often of very crude and unsafe design, used at sawmills for the purpose of disposing of by-products for which no other outlet has been found.

Regeneration. The process by which a forest, woodlot, or stand is renewed after being cut, burned, blown down, or otherwise killed. It may be brought about by either natural or artificial means.

Reproduction. See **Regeneration.**

Residual stand. The stand remaining after a cutting.

Re-stocking. The replacing of artificially reared fish in lakes or streams in which the fish population is depleted by reason of too much angling or from other causes.

Rollway or Skidway. An orderly pile of logs usually built near a road so that the logs may conveniently be loaded on trucks or sleighs, or near a river or lake in which they may be placed when the drive begins. See illustrations on pages 165 and top of 166.

Rotation. The cycle represented by the growth of a new tree to a predetermined state of maturity usually, but not necessarily, in place of a like one cut down. The length of this cycle depends, among other things, upon the species of tree involved, the characteristics of the soil and site, and the silvicultural methods used in exploiting the stand.

Salvage operation. An operation conducted for the purpose of extracting timber dying or killed as the result of damage by fire, insects, disease, storm, or floods, or threatened with death from these or other similar causes.

Sand-drifting. See **Soil-drift.**

Sawlog. A log of suitable size and quality to be sawn into lumber.

Scaler. One who measures wood cut in the forest and computes the volumes of cut wood. In Ontario only those licensed to do so may scale wood from Crown lands, and licenses are issued only after the applicant has passed an examination to test his knowledge and skill. Culler is an older, but now little-used, name for this occupation.

Second-growth. The forest which develops after the removal of the virgin timber by cutting, fire, or any other cause.

Seed collection. The process of gathering seeds from trees to supply to forest nurseries or to sow in areas selected for reforestation. In the case of conifers the cones, which contain the seeds, are collected before they open.

Seeder. A mechanical device used for sowing seed in a forest nursery.

Seed extraction plant. An establishment for preparing tree seed for sowing. The processes include drying the cones (in the case of conifer seed) to open them, extracting the seed, cleaning the seed, testing the germinating power of the seed, and storing the seed under proper conditions.

Seedling. A very young tree in the forest or woodlot or, in nursery practice, one not yet set out in a transplant bed.

Seed tree. A tree left standing after an operation for the specific purpose of supplying the seed necessary for the renewal of the stand.

Seigneurie. Land granted to a Seigneur (a French aristocrat) by the French Crown in the early days of the colonization of Canada.

Shingle. A thin, flat slab of wood tapering lengthwise in thickness used in covering roofs or walls. Cedar is the wood most in demand for this purpose.

Shingle-bolt. See **Bolt.**

Shook. See **Box shook.**

Silt. Fine particles of soils carried by the water in streams and rivers as the result of erosion. Where the current slackens or dies these particles fall to the bed of the stream or lake and form a layer of mud. Silt also discolors the water and prevents sunlight from penetrating the water to the detriment of fish and the aquatic plants and animals on which they feed.

Silviculture. The producing and tending of a forest scientifically.

Single-purpose operation. A forest operation in which only one type of product, for example, pulpwood or sawlogs or poles, etc., is removed. Compare **Multiple-use operation.**

Sinkage. The loss of wood sustained by reason of logs or bolts absorbing so much water during the drive that they sink before they reach the mill or loading point.

Skidway. See **Rollway.**

Slab. The piece of wood removed by the first saw-cut taken from the outside of a sawlog. This piece of wood, then, has one flat, sawn surface and one rounded one (usually with the bark still on it) and is tapered in thickness.

Slash. Debris consisting of tops, branches, broken wood and trees left on the ground after a logging operation. Also, as applied to land, the term indicates an area from which all merchantable timber has been stripped.

Slide. A flat-bottomed chute built of timbers down which water is flushed so that logs can be safely floated or slid instead of being driven through bad rapids or over falls which might result in much breakage or cause jams.

Soda pulp. A type of chemical woodpulp in which wood chips are cooked in a solution of caustic soda. Hardwoods are used extensively for this kind of pulp and the resulting product is used largely for book-paper and writing paper.

Soft maple. See **Maple.**

Soil drift. A type of erosion of light sandy soils brought about by the action of the wind whereby soil-drifts, comparable to snow-drifts, are formed.

Soil type. A classification of soil based on its composition (as determined by chemical and physical analysis) and/or by its capacity to sustain agricultural or forest crops.

Spawning bed. A spot in a lake or stream selected by fish as a suitable place in which to deposit their eggs. Depth of water, type of bottom, temperature of water, character of underwater vegetation, and other considerations influence the choice of site.

Spruce (Picea). Three species of spruce are native to Ontario, but only two of them—white spruce (**Picea glauca**) and black spruce (**Picea mariana**)—are of substantial importance. These two species are found throughout all parts of the Province where trees of any kind grow. Spruce is an important species to the lumber industry and vital to the pulp and paper industry. The chart on page 39, however, indicates that spruce is being over-cut and its use should be brought into balance by using other species whenever they can be satisfactorily substituted.

Square timber. See **Hewn timber.**

Squatter. One who settles on land which does not belong to him. By law a squatter acquires title to Crown land he may occupy under certain conditions including undisturbed occupancy for a specified number of years.

Stand. An aggregation of trees of uniform composition as to species, age-classes present and condition, occupying an area of any size but distinctly different from the forest in adjoining areas.

Stave. One of the upright pieces of wood in the side of a barrel, tub, pail, etc.

Stave bolt. See **Bolt.**

Stemwood. The wood of the main trunk of a tree as distinct from the branches and roots. Often called "bodywood" in Canada.

Strip-roads. Strips cleared at more or less regular and frequent intervals throughout a pulpwood operation at the sides of which the cutters pile the pulpwood taken from the adjoining area, and over which the wood is hauled out by sleigh in winter. These are discernible as the pale irregularly curved lines in the aerial view illustrated in the plate on page 24.

Stumpage. The amount charged by an owner for standing timber usually in terms of the units of measurement of the wood after it is cut. In the case of wood cut on Crown lands the term means the sum of the dues, bonus and other levies charged for the wood when it is cut.

Sugar bush. A stand of sugar maple trees cultivated or managed primarily for the production of maple syrup.

Sulphate pulp. This type of pulp, also known as kraft, is made by cooking wood chips in a mixture of caustic soda and sodium sulphide. The resulting pulp is tough and is used for good-quality wrapping paper and other purposes where strength is an essential quality. Pine can be and is used extensively in the manufacture of sulphate pulp.

Sulphite liquor. The liquid resulting from the manufacture of sulphite pulp which contains, besides the original chemical ingredients, the lignin extracted from the wood. This sulphite liquor is usually discarded though it can be, and sometimes is, used as a raw material in the manufacture of many valuable products.

Sulphite pulp. A type of woodpulp made by cooking chips in a solution of calcium bisulphide. The resulting pulp is used, unbleached in the production of newsprint; after being bleached, in the production of tissue, book and other papers and, in a more refined form, it is the basic raw material in the manufacture of rayon, cellophane and other products. Spruce is the principal wood used but other species can be used to varying but limited extent.

Sunscald. Injury (often fatal) to the sensitive growing tissue under the bark of a tree caused by direct rays of the sun. Forest-grown trees are not accustomed to complete exposure to sunlight, and if a few trees are left so exposed after an operation they are likely to die of sunscald.

Sustained-yield. The crop of timber which can be removed from a given area periodically without impairing the ability of the area to yield the same quantity of wood in an equal period in perpetuity.

Sweep. The process of re-floating stranded logs after a drive has passed down a river. Where several operators separately drive a river there may be a sweep after each operator's drive to avoid the mixing of logs of different ownership. Also the curvature in a log.

Tamarac. See **Larch.**

Tanbark. The bark of certain trees used in making the solution in which leather is tanned. The bark of hemlock and certain oaks were used very extensively for this purpose. In the case of hemlock the wood was usually discarded after the bark was stripped off.

Thrifty. Descriptive of a tree or a stand which is in good condition and growing at a satisfactory rate.

Tie. Timber sawn or hewn into pieces to support rails for railway tracks. Selected hardwoods or softwoods are used and the majority are now given a chemical treatment with a preservative to prolong their usefulness.

Timber-line. The demarkation between wooded and non-wooded areas. The economic timber line refers to the northern limit of growth of timber of commercial size in substantial quantity.

Timber-mining. An expression used to describe a ruthless felling of timber conducted without thought of the renewal of the forest. Hence, a timber-miner is one who conducts such an operation.

Top. The upper portion of a tree trunk with the branches attached which is not economically usable, or at least which is not used and is left in the woods.

Tower. See **Lookout tower.**

Towerman. The observer stationed at a lookout tower.

Transplanter. A mechanical device used in transplanting tree seedlings from seed beds to transplant beds.

Treating. Timber may be chemically treated to increase its durability when it is subjected to conditions favoring decay or, more rarely, to render it resistent to fire, or for other reasons. Such processing is done at treating plants.

Tree planter. A mechanical device used to assist in the planting of trees.

Trimming. The discarded pieces of wood resulting from cross-cutting a board or a plank exactly to the specified length and square across both ends.

Under-cutting. The cutting of a smaller quantity of wood within an area than the equivalent volume added by new growth on the area during the period between operations.

Undersize. Descriptive of trees of smaller diameter than the minimum at which they should be cut.

Veneer log. A log of special size and quality, and of a desirable species, cut for use in making veneer. Veneer is the name given to thin sheets of wood. It is usually produced on a special lathe and the sheet of veneer is cut from the log in a manner resembling the unwinding of a roll of paper. Sometimes veneer is sliced from the log as bacon might be sliced. Veneers are used for making berry-baskets and fruit-baskets, but more particularly in the growing plywood industry. Yellow birch and elm are the species most used for this purpose in Ontario, though other species are used to a lesser extent.

Virgin stand (or forest). A stand or forest the development and growth of which has not been influenced by human activity.

Walkie talkie. A portable radio-telephone which can be used to transmit and receive messages even while the person carrying it is in motion.

Waste liquor. See **Sulphite liquor.**

Water table. The upper limit of the level at which the soil is completely saturated with water. The water table moves up and down according to the amount of precipitation in the area and the natural or artificial drainage.

White ash. See **Ash.**

White birch. See **Birch.**

White oak. See **Oak.**

White pine. See **Pine.**

White spruce. See **Spruce.**

Whitewood. A common name for poplar in some parts of Ontario.

Wind-break. A belt of trees left standing, or planted, for the purpose of giving shelter from the wind. A wind-break may be used to shield a house, a garden, an orchard, a road or railway, or farmland.

Wind-firm. Descriptive of those species of trees which have root-systems which go deep in the soil and thus make the trees resistent to high winds.

Willows (Salix). None of the willows which grow to tree size in Ontario are of any special commercial importance. The kinds referred to in this report are shrub-like and may for the most part be considered as worthless weeds, their only useful function being that they provide ground cover. They often grow on land of low quality.

Woodlot. A relatively small wooded area most often associated with farms. Woodlots act as a source of fuel, posts, etc., for the farm and as a source of cash income from the sale of logs and pulpwood. In the aggregate their importance to the community is very great, quite apart from their commercial value, in that they help conserve soil moisture, provide a habitat for game and birds, retard water-run-off (and so help prevent floods) and reduce erosion by wind and water.

Woodpulp. Wood fibres separated by mechanical or chemical means and used for manufacturing papers, textiles, and many other products based on the use of cellulose.

Working plan. A long-term plan for the scientific and businesslike management of a forest area with the aim of getting the greatest annual crop of wood economically feasible in perpetuity.

Yarding area. A wintering ground selected by some wild animals, such as deer and moose, for reasons of food supplies and in which during deep snow the animals can move relatively freely along well trampled paths to feeding areas.

Yellow birch. See **Birch.**